CURRENT NOTES

Your Monitor on the World of Atari

Vol. 11, No. 7

September 1991
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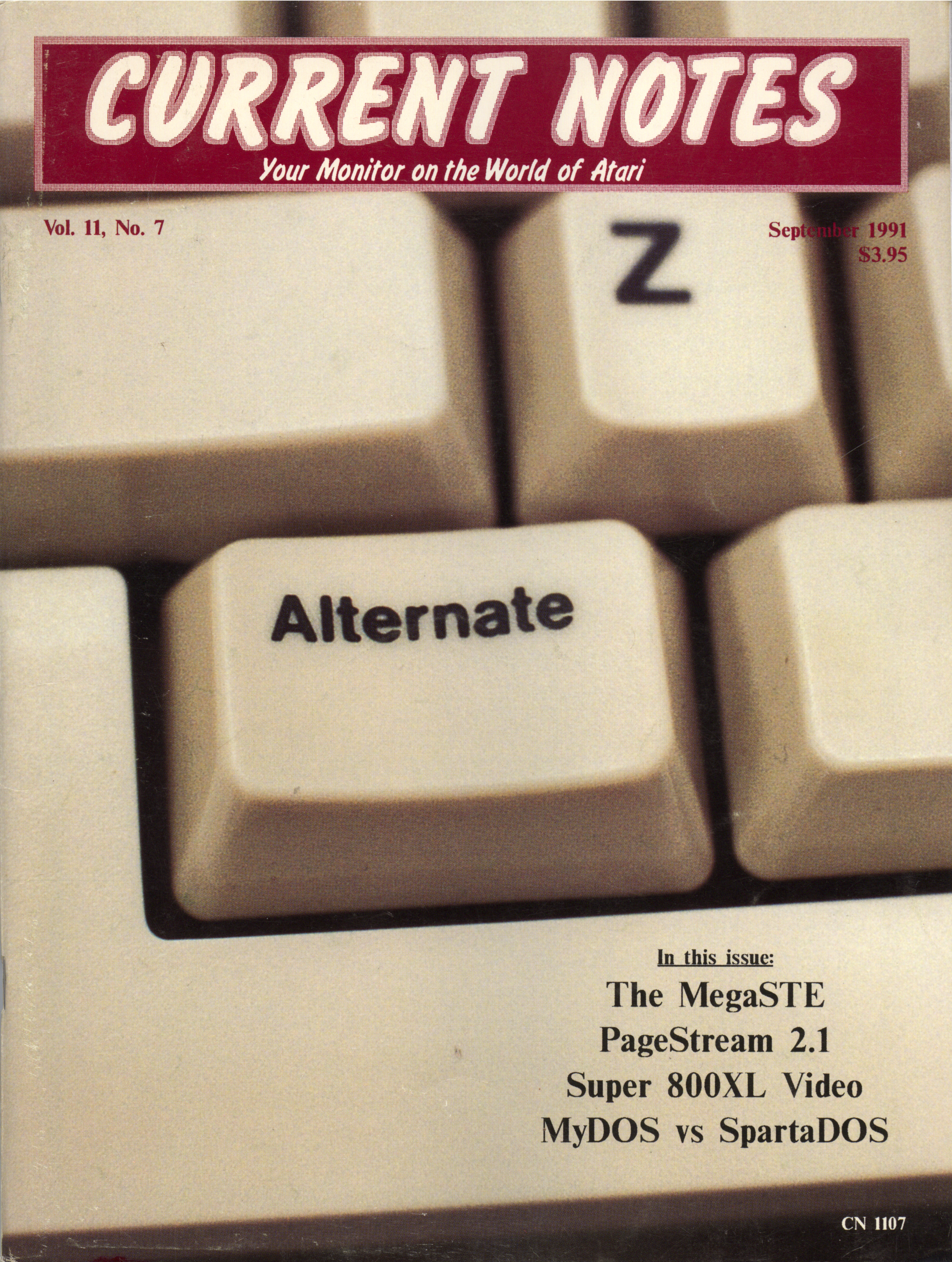

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The MegaSTE
PageStream 2.1
Super 800XL Video
MyDOS vs SpartaDOS

CN 1107

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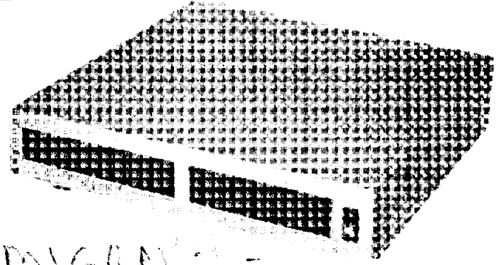

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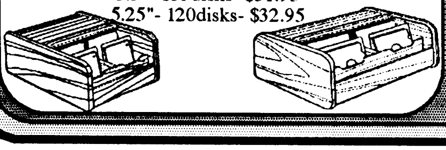

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Look at your mailing label. If it has the expression **9109** on the first line, that means your subscription ends in **1991, month 9,** i.e. the **September** issue is your last. Renew ASAP to be sure you do not miss any issues.

This publication is produced using an Atari Mega ST4, an Atari SM124 monochrome monitor and a Moniterm Viking monitor, a Navarone scanner, and the Atar SLM804 laser printer. Most of the output is generated with *Calamus.* Some pages, including advertisements, are produced with *PageStream* and others with *Publisher ST.*

From the Editor's Desk

by Joe Waters

"System Error ... Reboot"

The phrase above is one that elicits strong comments from my lips whenever I encounter it. It means whatever I have been working on is completely gone; I have to wait several minutes for the "booting" process and then start all over again. On my Macintosh IIx at work, I encounter it quite often, sometimes several times a day.

I've experienced this problem in the past and never could find the culprit that was, randomly it seemed, crashing my system. On my current machine, I had experienced several months of flawless behavior before the mysterious bug crept in again. Where did it come from? I don't know. How do you find the problem? I don't know. I've tried running virus programs, but they claim my hard disk is fine. I've tried rebuilding the Macintosh "system" from the original floppy disks, but that hasn't solved the problem either. I tried a brand new cartridge hard drive, copied all the files over and then used that as my main cartridge. Still, the problem persists. My next, (and final?) solution is to start again from scratch, rebuild the system on a new hard disk, and individually copy over only those files that I really need. I can't do that all myself, since I am on a network and some of the files I need must be installed by the network administrator.

Why do I burden you, Atari owners, with this litany of problems in the Macintosh world? For two reasons. First, the grass is not always greener on the other side of the fence. The Macintosh system is user friendly. New users can be up and doing productive things in very short order. When it works, it works beautifully. However, when it doesn't work, the poor user has no idea what the problem is or how to fix it since the complex Macintosh system has been carefully constructed to hide its mysteries from the user. The installation of any new program, particularly one that is meant to run automatically when you turn the computer on, may interfere with another program in the system and result in trouble. Even Mac Gurus at this point resort to stripping all extras out and testing the system by adding one program at a time to see just where the conflicts start arising. (The Atari can run into the same kind of problem with desk accessories that may not interact correctly with other programs.)

My Atari system has also crashed. However, it crashes very seldom and, when it does, the culprit has turned out to be a physical problem with the drive or, perhaps a chip on the motherboard. In either case, after repair, it once again becomes rock steady. Now there are programs on my Atari that have crashed the system. However, when a program is "buggy," you can avoid that problem by simply not using that program.

The second reason for bringing this up deals with dependability. Our network has grown from just a few people to several dozen. In the process, we have elected to turn control over to those specialists whose job it is to do "computer stuff." The "users" are generally paid to do something else. A computer is just a tool that helps them do their primary job. The number one demand of the "users" in negotiating with the new "system administrators" is DEPENDABILITY. When someone turns around to use his computer, he expects it to work, every time, all the time. We will give up a lot in bells and whistles, and freedom of choice, just to get dependability.

What is true for office workers is equally true for home users. I want, above all, my computer system at home to work. I want the programs I use to work, not sometimes, but all the time. I will give up bells and whistles, i.e. added functionality, to maintain system and program reliability. I will even pay more money for dependability. When something doesn't work right, it wastes my time because I lose work, or have to spend hours trying to discover what is wrong, or have to figure out ways to "work around" the problem. And "time" is something I do not have very much of and, therefore, I value it very highly.

If a programmer doesn't want to go to the trouble of debugging his program, or doing a good manual, he saves a few hours of his time, but steals thousands of hours of time from the purchasers of his product. If a manufacturer saves a few pennies using a part of questionable reliability, or doesn't provide the necessary flow of parts to keep the machines already on the market up and running smoothly, the bottom line is improved in the short run, but only at the expense of the consumer who will pay later for these oversights many fold more than the manufacturer has saved. The consumer will remember.

So, Atari, and those who program for Atari computers, pay a lot of attention to total quality management. If you want to survive, you will do so based on the quality of your products and your service. By the way, Atari, my dealer ordered a new motherboard for a Mega two months ago. It has not arrived. He has no idea when it will arrive. He has trouble getting anyone at Atari to answer the phone. Atari, tell me, why is it you don't want to survive in the U.S. market?

Joe Waters

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Letters to the Editor

Ecologian/Fractals

Sirs:

Thank you for your continuing reviews of Bresnik Software in *Current Notes* [Jerry Girard, July/Aug issue, p.60]. The comments on "Ecologian" were most kind; my students (and I) also chortle with glee when we beat a previous best time or Environmental Quality Index.

However, the review of "Fractals," which had some valid criticisms about documentation, was from the viewpoint of one who has not explored the fascinating world of fractals (indeed, Roger Penrose talks of the validity of the mathematical function as a true universe). I would suggest that anyone interested in fractals download files 5413, MANDELBB.ARC and 5141, SLOGRO.ARC from the GEnie 8-bit Atari libraries. Type m665;3 to get there.

Barton M. Bresnik
GEnie: B.BRESNIK

Movie Credits

Dear Mr. Poehland,

Enclosed please find a copy of the Atari *Movie Credits* program for your magazine to review. The program is a basic starting block with executable modules to run from the program environment to be added later.

We seem to have struck a responsive chord in you and are thankful for your thoughtful reply and the chance to peruse several back issues of your magazine. In returning to the Atari market after a hiatus of six years we felt a bit reticent and defensive as to what was going on in the market place. The slow reaction of your magazine was just another piece of fuel to the fire of us wondering what was going on. I hope you will accept our apology if we were too severe in that reaction.

We are using this program as a bellwether on the Atari 8-bit market; this may be unfair as the glitzy type portions of the program (like the screen builder with pulldowns) is not a part of the main package, but we felt we had to release the "shell" before the summer slowdown set in.

Leo Leonhardi
LJK Enterprises Inc.
Manchester, MO

The Alchemist Responds

Hey, no problem!

A review of *Movie Credits* is definitely in the works, although at the moment things are a bit muddled since LJK is improving the version originally submitted. Still, I'm hopeful we'll see a review in *CN* within the next couple months.

We 8-bitters are greatly encouraged to see one of our earliest and most respected producers resume an active interest in our market. I hope *Movie Credits* will be a success and we'll be able to look forward to additional new products from LJK in the months ahead.

Ben Poehland
CN 8-Bit Editor

Missing New Technology

Dear Mr. Waters,

I have been a loyal Atari owner since 1985, when the 520ST beat all competition as I comparison shopped to upgrade my TI-99. Over the years, I was quite satisfied running programs like *STWriter, TrueBASIC, CAD-3D*, and *Chessmaster 2000* on my color monitor and SS floppy drive. There was no reason for any upgrade.

Last year, my ST started acting up and was out of commission for a week. As I poked around under its hood, I found it harder and harder to counter the arguments of a friend who advised me to buy an IBM-compatible. I do not know why, but one day my ST started functioning again. Of course, I was relieved, but somehow I knew its days were numbered. Several weeks later, my 520ST died again, and no amount of prodding could revive it.

I searched bookstores for an Atari magazine with recent advertisements so I could shop for a replacement. Finding none, I bought a copy of *Computer Shopper*. Day by day, I slipped into the dark world of IBM-clones and MS-DOS. I even sank so low as to call some retailers for pricing and software compatibility details, coming excruciatingly close to buying an 80386-machine.

The TT on the cover of *Atari Explorer* renewed my interest in Atari. I got my hands on a few different Atari magazines and gave serious consideration to the new 1040 ST^E. I was hesitant about laying down $600, but when Atari dropped the price to under $400, I could not resist.

Now I sit before an ST^E upgraded to 4 Megs, with an Omniswitch connected to a Princeton Graphics Ultra 1400 multisync monitor. Its overscan mode fills the 14-inch screen with the ST^E's output, perfect for word processing and *Calamus* DTP. In one sense, I am content with my setup; it does what I need it to do, with satisfactory speed. But whenever I leaf through a PC-clone publication, I feel the advance of technology is bypassing us Atari loyalists. The ST might have been state of the art in 1985, but in 1991, it leaves much to be desired.

In general, Atari users do not seem to be enjoying the technological breakthroughs of the plunging prices that naturally follow. For example, why does the Supercharger IBM hardware emulator cost $450 (w/o floppy or expansion slots), when at XT-clone (w/floppy, 8 slots, and the ability to connect to my multisync monitor) goes for $250? Why does no Atari computer, even the TT, output VGA (not to mention Super VGA) in 256 colors? Will Atari ever use the Continuous Edge Graphics chip, which allows over 700,000 simultaneous colors and reduced "jaggies?" Why does the SLM605 laser printer cost over $1,000 when the Okilaser 400 costs about $630?

Please do not misunderstand. I fully support Atari and I love my ST^E. However, it would be nice to have some upgrade, expansion, or price reductions to look forward to in the future. A stock 1040ST^E, or even a Mega ST^E, may not always satisfy users' needs or desires.

Robert Young
Radford, VA

Booting the ST^E

Dear Joe,

Recently (June 12, '91), I purchased a 1040ST^E/1Meg, brought it home, and found out that it did not need STE_FIX.PRG. I then hooked it up to my MegaFile 20 and found it would not boot from hard disk! After many, many, many unsuccessful tries, three trips back to the store in Fairbanks (a one hour round trip away) and considerable hair–pulling and teeth–gnashing, the fellow at the store, Shawn Abshear, turned on the computer. He immediately realized he had not turned on the hard disk and absent–mindedly did so. NO, things did not crash and burn. It booted!!! Shawn tried it again, and again. Several times he tried and each time it worked. Since I sleep days, my wife had been doing the leg–work on this and had also been watching what Shawn and Frank Stallings, the head honcho at the store, had been doing. It was then she decided she could. Up to this point, she had only referred to it as "The Thing."

She brought the system home (she had the CPU, the hard disk, and all the cables) and hooked it up. It was at that point I heard words which would have awakened a grizzly in January, if said griz was computer literate, of course. "Honey, it works," I heard piercing the wake–up fog. "The hard disk is just fine, it boots from C: and I hooked up The Thing myself." Stumbling to the computer, I saw the Thomsom 4120 displaying the familiar desktop.

In order to keep this from becoming a novelette, I'll put a lid on it with the following observations:

1–With TOS 1.62, STE_FIX.PRG is not needed.
2–The computer needs to be turned on about 1 second before the hard disk.
3–I've also found this particular 1040ST^E does not at all like *NeoDesk 2.0.*
4–I have just discovered another bug, but haven't had time to fix it. *WordPerfect* will bomb (with from 3 to 9 bombs) if the UP cursor is held down. The workaround is to use the "SHIFT ^" combination to move the cursor UP several lines. (Anything more than five lines). As I said, I haven't had time to really look into it as it just came up while writing this letter.

Bob Ledbetter
North Pole, Alaska

[Three days later, we received the following update from Bob:]

Joe, here is an update to the problem I found, and told you about, in *WordPerfect*. Seems only the Dec. 6, 1990 upgrade to WP has this problem, and WP Corp has written a fix for it. If anyone else has experienced this problem, all they need to do is call WPCorp and they will send the fix. WP Corp only needs the person's address and license number. They told me this morning that it will take 7 to 10 working days for me to get it. Not bad considering where I live. A workaround until receiving the fix is to slow the "key repeat" rate way down. That's done in the control panel.

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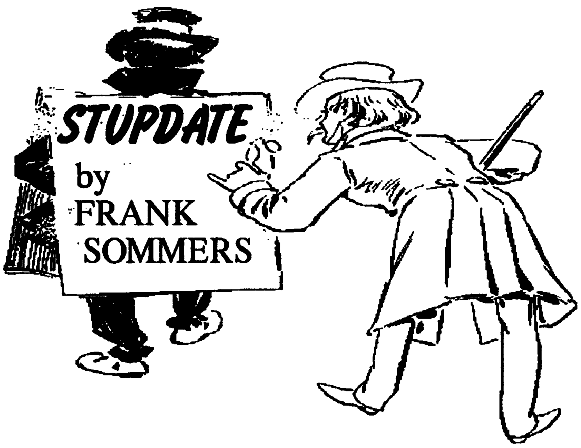

TWO DAY MEETING OF ATARI'S AEGIS DEALERS, "BUS. WAR" ENDS, QUO VADIS TT'S? FMS GDOS NOW SHIPPING

Atari Pursuing Image Surgery So They Can Play with the DTP Pro's

AEGIS Dealer Meeting at Atari

In the June issue of *CN* we "kudoed" Atari for planning to emulate Atari Canada's policy of flying in their dealers for an annual meeting at Atari's expense. Then in our July/August issue we dourly observed that the U.S. meeting had been postponed because some of the Direct To Print products were still unavailable. Atari rerscheduled the meeting and on August 5th Atari's "Strategic Partners" arrived in Sunnyvale for the big DTP/MIDI dealer/developers' shindig.

The first day was devoted to a series of talks by Atari management. They discussed such dealer-vital issues as where Atari saw itself now and where it wanted to be, dealer accounts, how returned merchandise would be handled, and what repair and service policies would be. Considerable emphasis was given to the need to level the field. This would involve some electronic surgery to alter Atari's image from that of a home computer device to a high-end machine that could play on the same field with the big boys, and do Direct To Print stuff versus home style Desk Top Publishing. Atari's sense of being "recognized" at the mid-summer Chicago Electronic Printing Show apparently has contributed to their confidence that dealing in high-priced software and even higher-priced print-setting equipment is now realistic.

The AEGIS group sat around ten tables with four dealers/developers at each table. One dealer present estimated that of the 40-odd people attending, there were about 20-22 dealers present, with 1/3 of those representing MIDI music stores.

In Homer's Day a Shield

Besides someone who has ordered a "requisite" amount of computers, what is an AEGIS Dealer? The dictionary defines being under the AEGIS of someone as under "the sponsorship, direction or control..." In ancient Greece "aegis" stood for shield, so possibly Atari is "protecting" its AEGIS dealers. Their definition, however, leans more toward a dealer who is essentially a reseller, with a full line of Atari products and a complete service and repair department, excepting of course MIDI dealers, who are excused from the repair confinements.

At the end of the first day, there were some demo's of direct to print products and equipment. On the second day, the group divided into two, with the DTP dealers staying at the desks, each with its own monitor and TT computer. The TT's had the new Matrix CoCo card installed. An $899 card, it provides you with a color resolution of 800x600 with 256 colors. The new FMS GDOS was also installed. Both the CoCo and FMS GDOS are now available. The DTP group stayed in the hotel and the MIDI group went off to Cogswell, the local college of musical knowledge for their laboratory work and briefings. Goldflair and ISD conducted seminars on the role their products would play in the new world, e.g. *WordFlair, Dedot Line Art, Dedot Professional, DynaCadd* and *Calamus SL*. Gribnif's Rick Flashman displayed his considerable line of products and SoftLogic showed off its new *PageStream*. MIDI displays included Hybred Art's digital mastering system, *C-Lab*, and Dr. T's newest programs.

Both sessions were described as surprisingly harmonious, considering what was at stake from both sides. There was no acrimony or sharp criticism and the group seemed to be shrouded in the conviction that the "new way" would be profitable for dealers and Atari alike. The only reference to advertising (see DarkWink on radio advertising in this issue) was to the likelyhood that the TT would begin appearing in fall magazine advertising, including Publisher. CN's previous report that the dealers would be provided with air tickets along with the invites apparently was in error, but future reimbursement for accomodations was a likelyhood.

In sum, the smallish group of dealers attending felt the session was eminently worthhile. Atari had distinguished itself. And by 10 p.m. of the second 13-hour day, both Atari staff and guests were exhausted. Well done, Atari.

Pro Time

We talk a lot about marketing and Atari's lack thereof. Recently, a dealer in North Carolina put a few ads in the local paper, talked with Atari and there you were--an Atari fest. He was the major developer, but Atari's luminaries showed up, and with 450-odd other people Mr. Sheldon Winnik of Computer STudio had demonstrated if you want to promote a product you can.

Similarly, the software developer, Lexicore of Fairfax, California (58 Redwood Road, tel: 415-453-0271) has introduced a graphics animation program, *Phase IV*. But they haven't just intro'd a product, they've decided to "market it." On 1 August, on Compuserve, they began their graphics animation seminar/tutorial for professional applications. Running each month on Saturdays, they will conduct a beginning-to-end, from-top-to-bottom online course on professional computer graphics. Stress will be on the first step, i.e. graphic artist outlining their needs and goals, use of current products, e.g. *Cyber, Cad 3-D*, plus the German leaders, and how practical it is to try to produce professional applications on your home computer. Tune in. (In the next issue of *CN* we will have a full review of the powerful *Phase IV* package by professional animator, Stuart Bonwitt.)

The War Is Over

The "Business Is War" war is over and Jack Tramiel appears to have lost it. The final proof is contained in advertisements throughout the country offering IBM clones at prices Atari can't compete with. A 286 machine running at 12 megahertz has a street price of $775. "Big deal!" you might comment, without waiting to find out how it is equipped. It comes with 1 meg of RAM, both a 3.5 floppy with a 1.44 meg capacity and a 5 1/4 " drive. All this is built in along with a 44-meg hard drive. To top it off, the machine has a VGA color card and a 14" VGA color monitor that produces colors that can't be matched on any Atari computer. The extra ribbon around the package consists of a bundle of software; MS-DOS with two books of documentation, LotusWorks and four volumes of documentation for the Lotus text editor, data base manager and spread sheet, and MicroSoft's *Word*.

The lowest priced Atari machine, a 1040 ST^E with 1 meg of memory costs only $399, yes. But when you add on the other items, i.e. color monitor, hard drive, additional floppy and software, you end up with a package that costs about 50% more and looks like a bit of a hodge podge compared to the two compact IBM clone items. They almost pop out of their boxes and, in about 10 minutes, you have them connected and powered up. Upon bootup you marvel at the quickness of the screen. (And this is only a 286, with its five-year-old technology.) There before your eyes are the programs to choose from, already pre-installed on the hard drive.

But the hard question is why? Why would we buy such a machine, even at that price? Same reason the Publisher of *CN* did a month ago. A daughter is off to business school in Paris and there they use only 286 and 386 IBM's and clones. No Atari's allowed. (Interestly, a similarly equipped IBM clone there, with a heavy student discount, still costs almost $1,900.)

And what was it like, learning the ins and outs, while installing *SideKick, Publish It,* and *WordPerfect 5.0,* and *Right Writer*(compared in the last issue of *CN* with the ST's *GramSlam*)?

Miserable! MS-DOS, for an Atari apostate, is an incantation of the devil. Have you ever tried creating a document on *Publisher ST* with no mouse, and arrow keys only. Returning to the ST was like slipping into a jacuzzi, after fighting your way out of the briar patch. And once back at "the real computer," your prayers are spoken with even greater intensity, "Hang in there Atari. You gotta hang in there."

After all, losing a war doesn't preclude future triumphs. Look at Saddam.

Mouse-Eye View of Atari Warehouse

If you task the mice in Atari's warehouse to count the crates and tell you how fast you can expect to receive your TT & Mega ST^E orders, you may be disappointed by their reports. As of the beginning of last month, there were no crates full of either machine. What there were were mega boxes of Lynx, Atari's best advertised product. There may have been some Portfolio's, but they were out of sight. Along with the Lynx, there were also quantities of 1040 ST^{E}'s, Atari's next hottest selling computer item.

So what has happened to all those TT's and Mega ST^{E}'s that dealers all over the country were urged to order so that Atari could "lease" a factory and start producing. In fact, dealers got the impression that an order of "20 TT's" would be "a solid number" for preferential treatment, but at least order what you expect to sell in all of 1991, if you want to have anything on hand for Xmas, i.e. filling a second order might run over into 1992. Thus, orders were placed in sizeable numbers and production began. But where are the machines?

Atari explains the shortage as resulting from the sale of their Taiwan factory, having to get orders from dealers and then rent productions sites. The TT, because of FCC approval problems, was the last in the chain. Mega ST^{E}'s will be in plentiful supply, per Atari, by the beginning of September and TT's with full Class B approval should also begin arriving.

The New Machines

Sam Tramiel has let out the word that 1992 will see four new Atari computers, significant machines. This may have generated the rumor that the TT is an interim computer and will be shelved almost before it reaches dealers shelves. We presume, possibly incorrectly, that two of the "new" machines will be the STNotebook and STylus (introduced as STpad). As we noted earlier, STNotebook may meet the same competition barrier that Portfolio did. Starts selling well, and then is overtaken by a superior device, as Portfolio has been overtaken by Hewlett Packard's HP 95LX, $600, and thus costing less than a fully outfitted Portfolio, and touted as a "performer."

To put even more pressure on Atari to get out new, advanced, unique computer products, as Atari did with the ST, IBM has announced it will release a hand-held computer that talks to your home or your office computer by radio or cellular telephone, take your pick. The computer, called PCradio, will send or receive faxes, or you can just use it as a telephone, wherever you are. Cost? Not announced. Release date in 1992? No, fall of 1991.

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Page 1

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1116	25th anniv. Star Trek show (C) **NEW!**
894	Mac Nudes and PicSwitch utility
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903	Simpsons digitized sound/animation
1117/1118	Erotic Spectrum Nudes (C) **NEW!**
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1172	Star Trek World: info & pics! (CD) **NEW!**

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1067	3D Tron light cycles: great! (C)
989	Berzerk clone w/ digit.sound (CJ)
1142	BoulderDash/Dig Dug clone (C) **NEW!**
1140	Bullet Train: track action (1C) **NEW!**
988	Dan's Dungeon-major action (CJ)
987	Dungeon Adv-awesome DM! (C)
1139	Futuristic racing/shooting (C) **NEW!**
876	Fuzzball: Q*BERT clone (CJ)
860	Go Up: Lode Runner clone (M)
138	Grand Prix **2.1** car racing (C)
884	Hollywood Squares TV show (C)
142	HRS: Adult graphic adventure (1CD)
895	Mini-Golf & Shanghai clone (M)
859	Mystic Mirror: 2 player Dung. Master (C)
985	Name this Tune + 100 tunes (CJ)
139	Nude shoot 'em up (1C)
133	Nude strategy games (C)
124	Risk/Tetris clones (M)
1141	Scramble cave arcade clone (C) **NEW!**
1000	Skate Tribe: best action/grafix in PD (CJ)
880	Sorry! Excellent board game (C)
155	Strip Breakout (C)
881	Stu's Pool with digitized sound (C)
878	Welltris clone & Tetriside (C)
INFO	
888	Cheats/hints for 100's (really!) of games!
1143	Revolution Handbook **NEW!**

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904	Cosh 16 voice MIDI Sequencer
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1166	Gemini utilities/icons **NEW!**
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801	Mouse Accelerator 3/Desk Manager 3.3
1167	NeoDesk Utilities 4, very useful **NEW!**
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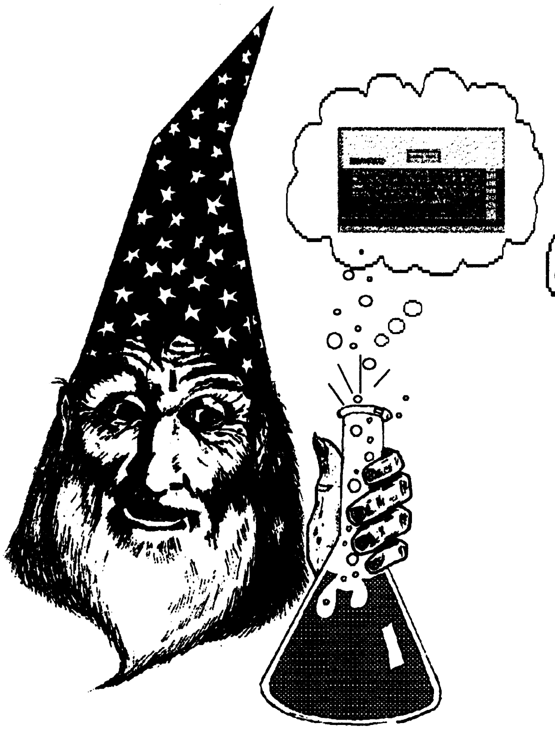
VISA

the 8-Bit Alchemist

by Ben Poehland



For you loyal followers with a hankering for 8-bit hardware improvements, the Alchemist has cooked up a video upgrade for the 800XL that even my old mentor Avicenna would envy. Originally published in the February 1987 issue of the now-defunct *ComputerSmyth* magazine, Super Video Rev 2.0 is more than just a warmed-over serving of the original concoction. Much more. Still, I'm grateful to Mr. Edward T. Dell, Jr., formerly the publisher of *ComputerSmyth*, for allowing me to pursue the idea to its full fruition here in the pages of *Current Notes*. If you have ever complained about the smeary video on the 800XL, or the lack of a separate chroma output,see my "Super Video for the 800XL" on pate 42. Try to avoid salivating on the pages as you will undoubtedly need that article close at hand when you plug in the soldering iron.

For you 8-bitters hungering for news of the market, the Alchemist will exchange his Alchemist hat for his Columnist/Editor hats. (Man, this looks weird, I hope no one comes to the door.) And since this is my last opportunity to mention the upcoming WAACE AtariFest in Reston VA , let it be known that The Alchemist has made reservations and plans to be in attendance. Look for my roost in the Swap Room!

NewsBytes

In my July/August column I inadvertently referred to Bob Berberick as the author of the review of *Chess-Master 2000* that appeared in the June *CN*. Of course, it was actually Dave Harris who authored that excellent review (Bob reviewed *Showdown Hockey*). Sorry for the mixup, guys, have pity on a doty old Alchemist.

Hard on the heels of the collapse of *STart/ANTIC* comes word that ICD, Inc. and Atari Corporation will totally withdraw from the Atari 8-bit market by the beginning of 1992. For Atari, the withdrawal is complete (at least in the USA), encompassing hardware, software, and customer support. For ICD, it means clearance of all 8-bit products, though it appears some support will continue in the form of product warranties being honored, etc.

The entire U.S. Atari market is reeling like a punch-drunk boxer. The blows that merely stagger the ST community are devastating to the 8-bit market, whose fortunes tend to fall at a faster rate than the market as a whole. Although the bruises we've sustained in the past year have been painful (and will, in the long term, ultimately prove fatal) in the short term there is actually a glint of relief on the 8-bit horizon. To be sure, the atmosphere now is one of "eat, drink, and be merry, for tomorrow...." But what the heck, you might as well get your goodies while they're still there for the taking.

The first such relief comes from ICD's warehouse 8-bit clearance sale. If you ever wished for an ICD or OSS product, now is the time to order! As of this writing (July), ICD is now supposedly down to the "dust on the shelves" but is still taking orders and placing a number of items on backorder. So you might have to wait a month or two for their final production runs of certain items, but they should come through for you. Call ICD at (815) 968-2228 voice or their BBS (815) 968-2229 (300-9600 Baud) 8AM-5PM CDT to place an order. If you log onto the BBS, bulletins will inform you of the latest status of 8-bit sale items, and you can browse the product info files for prices and product descriptions. [ICD, Inc. 1220 Rock St. Rockford, IL 61101.]

It would seem Atari Corp. has decided to give us 8-bitters a kind of going-away party. Apparently, the brainchild of Greg Pratt and Bob Brodie, Atari Corp. is sponsoring a major show November 23-24 at the Ramada O'Hare in Chicago (only a mile from the airport), in conjunction with local arrangements by the Lake County Atari Computer Enthusiasts (LCACE) user group. The unusual thing about this Fest is that 2,000 sq. ft. of space has been reserved exclusively for

8-bit developers, vendors, and buyers. Even more, Atari is scraping the warehouses clean and will dump all remaining 8-bit stock at the Chicago Fest. One can only imagine what classic treasures will be unearthed when all those dusty old crates are cracked open! I reckon the message here is: if you are a serious 8-bit devotee, this one's for you, and it's Atari's farewell to the 6502 classics so many of us grew up with. For detailed info, contact Mike Brown at LCACE (GEnie: M.BROWN56), call the 24-hour Fest hotline at (708) 566-0682, or write: Chicago ComputerFest by Atari, c/o LCACE, Box 8788, Waukegan IL 60079-8788.

Twilight Sources

Indications are that Bob Puff is making a mighty effort to shape up Computer Software Services (CSS) following his acquisition of that company in June. He seems to be hard at work on ads, catalogs, price lists, vendor policies, and all the minutiae that go with running a business. To the best of my knowledge, CSS is now the last major developer committed to the Atari 8-bit market, and, in my opinion, their offerings constitute perhaps the boldest, most innovative, and broadest product line ever offered by a single Atari 8-bit developer. If there is anything like a bright star illuminating the 8-bit Twilight, it has to be CSS. [Computer Software Services, Box 17660, Rochester, NY 14617. BBS (716) 247-7158, voice (716) 429-5639, FAX (716) 247-7158.]

As if to confirm the periphery of the 8-bit market is still functioning, despite impending collapse at the center, I recently received the new BRE Software catalog. Nice! Sixteen pages' worth of professionally printed PD and shareware goodies plus an order blank and a toll-free number for credit card orders ($20 minimum). In addition to the fine selection of 8-bit software, BRE also offers 34 titles for the Lynx. Contact BRE's customer service department. It took awhile for them to add my name to their mailing list, a process I'm sure would be expedited if you send them two bucks (the cover price of the catalog). [BRE Software Dept. CCT Box 25151, Fresno, CA 93729. Customer service department: (209) 432-3072.]

Incredibly, there are still a few Atari-related items floating around in the mainstream mailorder market. The latest catalog from Midwest Micro, a heavy advertiser in *Computer Shopper*, offers the Xetec Graphics AT printer interface for $59. Midwest also offers an excellent selection of printers, modems, and cables. In my experience their shipping is fast (a week), and their answers to my queries were quick and correct. [Midwest Micro-Peripherals, 6910 U.S. Rt. 36 East, Fletcher, OH 45326. Midwest has a toll-free customer service line, (800) 243-0313.]

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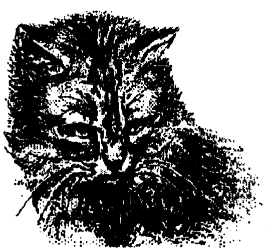

The Junkyard Pussycat

by John Barnes

Seeing Is Believing

"Visualization"

The Junkyard Pussycat has been spending a lot of time lately on the subject of "visualization." He has been seeing the term more and more often in a variety of contexts. The journal "Computers in Physics" has a column devoted to the subject, the taxpayers are funding "visualization labs" in universities, the local mainframe center is soliciting input on the selection of "visualization tools," the list goes on and on.

What is it?

What is this "visualization?" The best definition the Pussycat can come up with is that "visualization" pertains to techniques for presenting complex numerical data in a form that permits the brain to act on it with the sense of sight as an intermediary. This distinguishes visualization from the kind of artwork that a user will create with DTP, painting, or CADD tools (although the distinction may get fuzzy in the last case).

Within that definition, we see that there is nothing new in this game. The local weather radar on the cable TV represents the strength of radar backscatter over a large area as false colors. CAT Scans, MRI scans, and DNA fingerprints rely heavily on imaging and are now part of our general culture. Satellites enable generals to look right over the shoulders of soldiers on the battlefield and, as in the Gulf War, cruise missiles now visualize for you the target as they approach it and blow it to smithereens. Images fed byte by byte from the edge of the solar system are beamed into our homes. Various non-optical microscopes show us the surfaces of complex chips, the eyes of flies, and the very atoms on the surface of materials.

In all of the cases described in the preceding paragraph, data is obtained as a function of two spatial variables; x and y. One of the simplest visualization techniques can be described as follows:

1) Take data from the function z=f(x,y) and display it on a uniformly spaced grid, filling in the values for missing grid points if necessary.
2) Assign a color index according to the z value for each grid point.
3) Paint the grid squares onto a display screen using colors found in a lookup table pointed to by the color indices.

At 1/10th the Cost

Codes for doing this on expensive raster display devices have been around since the '60s. Back in 1983 the Pussycat spent close to $100,000 of his employer's money to get into this business.

The same work can now be done with a desktop computer that costs considerably less than $10,000. Atari users can experience a tiny bit of the flavor of visualization with Craig Buchanan's VIEWGIF or one of the others available from many sources. GIF (for "Graphic Interchange Format") is one of the most widely used of the multitude of standard file formats that have sprung up to allow visualizers to swap files.

More complex manipulations can be carried out with a program from Europe called "AIM" (for Atari Image Management). There is said to be a color version, but I have never seen it. The black and white version suffers from atrocious documentation.

To make full use of the potential in this kind of visualization, one must be able to display 256 colors from a palette of over 16 million on each scan line of a monitor with at least 640x480 resolution.

A true workstation maven would want many more colors and many more pixels, but there is no need to be greedy. The specifications given match a Mac II with a color card. Some "Super VGA" cards for MS-DOS machines also support 256 color displays in high resolution.

The range of tasks that can be handled with such a simple application and rather modest hardware is surprisingly broad. Two of the best Mac applications that do this job are freeware with source code available. Atari developers should be able to get up and running right away when they get decent hardware. Those who are interested should look for *Image NIH* and *NCSA Datascope*. *Spyglass Transform*, a gussied up commercial version of *NCSA Datascope,* gives many more possibilities at the modest list price of $495. Interested readers can find a review in the September issue of *MacUser* magazine. Similar products for MS-DOS machines may also be available. Sun and Silicon Graphics have sold many machines because of their beautiful support for these applications.

Unfortunately, Atari hardware that is capable of meeting the demands of this application is, to the best of the Pussycat's knowledge, not yet off the drawing boards. Somebody could make the Pussycat's day by surprising him on this score.

Machines that want to stake a claim to usefulness as desktop workstations need to be able to handle this application very smoothly indeed. However, they need to do more than simply draw pretty pictures on a screen. They must also download data from other machines on a network at high speed using industry standard protocols (Ethernet, TCP/IP, etc). Desktop work-stations need lots of memory to manipulate images and data. They also need lots of disk storage. Computational speed is also essential because the people who use this stuff can't wait to see the next image. Multitasking is essential to allow communications, display, and computation to share resources in real time.

A quick look at the above requirements shows that these are things that nearly everybody wants. The difference is that the people who do visualization work are prepared to pay for them. In this sense, the demand for improved visualization is one of the principal factors driving the evolution of desktop computing.

Mainframe evolution is also being affected by the improved ability to display results. Scientists and engineers are now willing to tackle bigger problems using more realistic models because they can see their results better. There is still a steady market for Crays and the like because of their unique ability to handle huge numerical simulations rapidly.

This creates an environment where several machines collaborate on a job. The mainframe crunches numbers, workstations display results, and DTP machines put them on pages for publication. This collaboration is only possible when the various elements can talk to one another easily using standard communications protocols and standard data file formats.

In the past, Atari developers have been too content to stay in their own tight little world. We have networking, but no Ethernet (except for a European form that has not caught on). Paint programs like *Neochrome* and *Degas Elite* do not provide conversion from ASCII data files. Page layout programs do not share text files, except in an unsatisfactory way. Only the highest end drafting programs support importation of foreign files.

What Happened with Atari?

Back in 1985 the ST was ahead of the pack. A reasonably fast processor, an inexpensive color display, and adequate RS232 capability produced an attractive smart terminal. The machines had good penetration in schools and laboratories. NASA, the Naval Research Laboratory, the University of Maryland, and others were quick to use ST's as economical terminals and display stations. European software authors like Simon Poole, author of *Uniterm*, were quick to apply the new machines in the laboratory.

Clone makers, however, soon exploited their entrepreneurial freedom and an open bus architecture to devise new standards for color display on MS-DOS platforms. Color Macintoshes were slow to arrive, but arrive they did. Stodgy old raster displays that had to be hooked directly to minicomputers soon began to gather dust. Tektronix storage scope terminals, once very common, are scarce today.

Software development on the Atari platforms stalled because of inadequate documentation and development tools. GEM fell by the wayside as a screen management standard. TOS and GEM were not designed to accommodate multitasking. A basically closed hardware environment made it difficult for users to interface to new display devices. These developments soon left Atari stuck in a rut as the pack overtook it. Seeing this, Atari's management apparently decided to concentrate on the European market and on applications like MIDI and desktop publishing for high-end products while attempting to appeal to the home consumer with games at the low end. With exception of game software, color display capability was perceived to be of minor importance in these areas.

Some good software did come along. The Cyber series of products, and individual applications like *Cartographer, Genesis* (for building molecular models), and *Circuitmaker* are examples. Unfortunately, they were slow and, in some cases, buggy. Lacking an adequate user base because of the scarcity of ST's in the real world, these seemed to wither on the vine.

What About the Future?

With the introduction of Mega STe's and the TT, Atari has taken some steps to catch up. Are the steps big enough and soon enough?

The modularity that is obtained by adding a VME port may prove to be very important. This can provide a means of improving the video display and for interfacing to Ethernet, thus permitting the use of the machines as workstations. A 24-bit color card is said to be in the works, although it is not clear what this means. Cards that display 256 colors from a 24 bit palette are sometimes referred to as 24 bit cards. In reality, this is adequate for a great many visualizations. Most Mac II users opt for this and many people are happy with Super VGA on MS-DOS machines.

The pixel count will be critical. 320x200 is not good enough because it is too blocky for good imaging. 640x480 satisfies a lot of Mac II users. 1024x768 or 1280x1024 is still pretty pricey when it comes to driver cards and monitors. These resolutions are mainly needed for things like X-Windows terminals with a lot of clutter on the screen. Unfortunately, at these pixel counts, the monitors also become rather bulky.

If economical display cards, fast memory expansions, and competitively priced LAN hardware can be introduced, the new Atari machines may find a niche in the visualization workstation market.

What About Software?

All of this fancy hardware is useless without software. In this area it must be said that Atari developers have failed to accept the challenge of porting tools that are available in the public domain to the ST. *NCSA Telnet* forms the basis for much of the Ethernet (more properly TCP/IP) communications ability of Mac and MS-DOS platforms. Except for an obscure application for packet radio (named, I think, *KA9QN*), no one has taken the trouble to implement this. The failure to implement a program along the lines of *NCSA Datascope* is even more egregious because this is an attractive, yet simple, tool that would find a lot of uses. Perhaps a simple program to convert tables into GIF format would be good enough, but even this is lacking.

There are glimmers of new products, most notably the Lexicor Phase-4 programs. Will these have the import/export capabilities that are needed to adapt them to visualization work? Or will they stay within their own closed environment? One hopes they would choose an open approach.

Will *FSM GDOS* evolve into the display tool that Atari could have had years ago by going with Postscript? Will more applications support Postscript now that the prices of printers have plunged? Stay tuned.

What About Europe?

Atarians have long clung to the hope that the old world would be the salvation of the new. There are some intriguing products there, like *SciGraph*, that we have yet to see on these shores.

There are, however, what appear to be cultural barriers to the movement of software across the sea. While *Calamus* partisans boast of the speed and power of their favorite DTP tool, it has a strange feel that the Pussycat has not gotten used to, and he has yet to master data importation from WordPerfect, which was so simple with good old *Publisher ST. Tempus II* is another example of the European tendency to get carried away with their own ideas of user interface. The file selector for this program is awful and there is no way to turn it off. *Signum* (said to be wonderful for scientific word processing) is another example of a power tool that simply has not caught on here.

Can the European market build a critical mass before its developers are submerged by the influx of productivity software for other platforms? The signs are not good. Borland's transfer of the rights for *Turbo C* to a German development house may be a sign that the European market for ST power tools may not be as great as we thought it was.

I hope that I have made the point that there is at least one market other than DTP in which Atari hardware may be able to perform yeoman service in the near future. The simple visualization application (simple, at least for those who have tamed our favorite beasts) describred above is merely a foot in the doorway to the fascinating world of bringing one's numbers alive.

The Pussycat welcomes, as always, correspondence on this or anything else that is on your mind. Write c/o Current Notes or contact him online at any of the following addresses:

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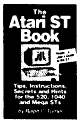
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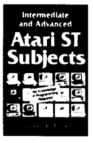

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4th UK 16-Bit Computer Show

Novotel Hotel, London

Reviewed by Colin Hunt

Once again, the 16-Bit Computer Show has proved that it is one of the leading events within the UK computer industry, with over 22,000 people visiting the 120 stands over its three days in July. The show, billed as "Everything for the ST, Amiga and PC - Business, Entertainment, Education," was spread through three halls and two floors of the Novotel Hotel.

A Few New Products

Among the few companies displaying new products, Microdeal wins the prize for the newest, with the release of their 2 Bit Systems Stereo Replay sound sampling and output cartridge. Available for $149.95, the Stereo Replay system allows any Atari ST to record and play back stereo samples. Features include Stereo Editor which supports 8-, 12- or 16-bit resolution in mono or stereo formats, and has the ability to freely convert between them. The editor also supports features such as channel swap, and loop and channel cross fade. Another feature of the new package is Stereo Beat, which allows you to load kits of up to 15 different samples into memory and then play 3 channel (left, centre and right) sounds out of the stereo ports of the cartridge. The package also includes sample routines in machine language and Hi-Soft, GFA and STOS BASIC. Microdeal also had on display their other sound orientated products: *Replay VIII, Replay Professional, MasterSound 2* and the bargain of the show *Quartet* and *Playback* for only $25 the pair. *Quartet* has recently been upgraded to version 1.5 in order to support the stereo Playback cartridge.

Talking of stereo cartridges, the MPH stand was demonstrating their Monster Stereo Cartridge for the ST, along with their advertisement that shows a formless green monster with joystick in hand, mouth wide open and a badge that says "Hi, I'm Phil." Glad I'm not!

A Database Accessory

Another new product being displayed at the show was *1st-Base*, a database for the ST from Victor GmbH of Germany. The demo version is extremely fast, but whether it's the fastest database for the ST/TT, as their advertisement states, is open to dispute. One real nice feature is the ability to install *1st-Base* as an Accessory (just change the .PRG to .ACC), thus making the database available from within other GEM applications. When run as an accessory, the menu bar is within the accessory's own window, thus leaving the normal menu bar alone. In fact, it's like having a second desktop, as *1st-Base* has its own trash can, clipboard and filing trays. Victor is currently looking for a UK distributor and expects *1st-Base* to sell for less than $167. Their other product on display was *1st-Address* which has, for some reason, been supplied on ROM and appears to be a more specific version of *1st-Base*.

A company displaying a new(ish) product was *GFA Data Media*, with *GFA BASIC* version 3.6. This provides additional support for the TTs extra ports, sound and graphic modes. Hi-Soft, supplier of the very successful *DevPac*, was displaying several products due for release. These included *Wordflair 2 ST, Lattice C TT* and *Hi-Soft BASIC 2*. Frontier Software, a company that has specialized in the supply of hardware add ons was displaying their new centronics printer buffer Printer-Q along with their more established products, Forget-Me-Clock II and Xtra-RAM memory upgrade. Frontier has now sold over 3,500 Forget-Me-Clocks and nearly 10,000 Xtra-RAMs.

The Great Yak Appears

I'm not usually a games fanatic, but one of the highlights of any show, and recently missed, is the presence of the Yak displaying his latest power game, or demonstrating the beauty of *Trip-A-Tron*. So it is with great pleasure that I report that Llamasoft was at the 16 bit computer show, with the Great Yak himself demonstrating *Llamatron*, his latest ultrablast game. Now if only Atari would ask him to write something for the Lynx.

Other companies that regularly attend computer shows within the UK, with this one being no exception, include Care Electronics with their Flexidump Plus printer utility, Pandaal Marketing with *DAATAscan, DAATAmouse* and *DAATAsound*, a scanner, a mouse and sound sampler respectively. The later two being new products, though I never got the chance to take a look. Also present was Rombo with their excellent VIDI-ST video grabber. This product has now developed to the complete colour solution with the launch of the VIDI-RGB a electronic filter that takes a colour video signal and separates it into the three primary colors. Arnor Ltd was demonstrating their highly successful *Protext* and *Prodata*, while Protar Ltd, a daughter company of Protar Elektronik in

Berlin was displaying their home grown 440MB harddisk for the ST. Can you ever remember any of the keyboard shortcuts written into your word processor, DTP program, flight simulator? Ever remember the keystoke, only to discover you're in the wrong application? Well Silverbird Computing had on display a keyboard overlay for the Amiga, with an ST version available soon. Sold in packs of 5 for only $12 you can now produce an overlay for every software package you use.

U.S. Participation

One of the reasons I attend computer shows, as well as catching up on the latest products and seeing how they really work, is meeting old friends. So it is always nice to welcome companies like Best Electronics from the USA. I first met Brad at the WAACE Atarifest last year and have been doing business with him ever since. As usual, Brad was displaying all the unique spares only he seems to be able to locate, with products ranging from the 8 bit to TT. One stand I visited every day at the show (excluding ours) was Power Computing. Not because they had any special demos, but because of one product, a 110MByte harddrive for only $750. I managed to withstand the temptation, especially after my wife had said, "NO."

At any show, there are always a couple of stands that don't appear to fit. This show was no exception, with NASA Promotions demonstrating and selling the "indestructible" pen, and Global Environmental displaying its environmental air systems for providing dust free working and living conditions. I understand from the organizer that both companies had a good show. As well as all the above companies, the 16 bit show was well catered for the less serious half of the marketplace, with several PD libraries, software distributors (games), magazine suppliers and user groups present. The latter was the main reason for my presence at the show. I was helping to man the Association Of Atari User Groups stand.

Amiga, Atari, & Then PC

Looking through the show catalogue it is interesting to see the level of support for each of the main computer models the show was aimed at. Top of the "support list" is the Amiga with 50 stands, a close second was the ST with 40 and the PC with 24. Thirty-two of the stands were either supplying consumables such as disks and ribbons or supporting the games consoles that have recently invaded our shores. There was a distinct lack of educational support with LCL Educational Software demonstrating the recently released *Micro French* for the ST and other titles for all three machines. The only other stand sort of supporting the educational market was Microbridge, with their bridge tutor called *Microbridge*. The business end of the market was also, not supported well. But, with small developers such as Arnor, Hi- Soft, Victor, Care Electronics, Frontier Software and Pandaal, to name just a few, there were plenty of serious items to keep the non-game player happy.

Finally, to give you an idea of the current state of the computer market within the UK, recent figures detailing the % unit software sales for each computer type show that the Commodore 64 is still the most popular machine with 26.9% of the market. The Spectrum was second (21.2%), followed by the Amiga (18.4%), Amstrad (12.6%) and eventually the Atari ST with 7.3%. However, Atari ST "serious" software currently outsells other formats by two to one. Also, PC compatibles only account for 1.2% of the software units sold. This is due to the low home presence of the PC and the high volume of games sold on the other formats.

Who is Colin Hunt?

Well, let's see. I'm human, just, as I'm also a trampoline for my son. I'm English, have an Honors Degree in Electrical and Electronic Engineering, live next to Poole Harbour in sometimes sunny Dorset, and work for an American company called Sprint International. Finally, I'm a computer addict. You could say I'm an Atari Computer addict, but it's not quite true as I also have a Mac SE. I also help run the Bournemouth & Poole Atari Users Group (BaPAUG), edit the groups newsletter, called 8:16, and help the Association of Atari User Groups (AAUG) out at computer shows such as the recent 16-Bit Computer Show. Finally, as well as collecting Atari 8 bit computers (I have the only 1400XL in the UK in my collection), I also collect computer languages. In my spare time I'm a partner in Gralin International, which specialises in the supply of Atari 8-bit software and hardware. My address is: 248 Wimbourne Road, Oakdale, Poole, Dorset BH15 3EF, England.

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Atari in London

A Spring 1991 Update

by Milt Creighton

Atari, in the Beginning

Over the last eight to ten years, I have had numerous opportunities to travel to London in the spring for business. It has afforded me a chance to observe the fortunes of my favorite computer company in the U.K. over a long enough period of time to snag a few trends for *Current Notes*. Dashing from computer store to computer store may not seem like much fun even in London, but it's the only reliable way to gage the state of Atari U.K.'s health vis a vis Atari U.S..

Over the years, I have seen Atari grow from no presence at all to one of major influence in the U.K. home computer market. Over the past several years, I have observed what appears to be a continuation of a steady decline, first noted almost three years ago. Allow me to recapitulate my observations over the past few to contrast them with the current state of Atari in the U.K..

Solid & Growing

Around four or five years ago the Atari ST was a solid and growing success in London. There were major computer shows dedicated to Atari products. The Tottenham Court Road computer shops all had ST's prominently displayed in their windows (although not all of them had much depth in their stockroom) and Atari software was easy to come by--most of the electronic stores carried at least the most popular packages.

As an aside, I might add that the Brits don't do things quite the way we do. They have whole sections of London that specialize in certain kinds of products, and Tottenham Court Road is headquarters for the audio and computer buffs. Atari wasn't confined to just the specialty shops, however. Even major department stores, such as Selfridges, devoted a large section of their computer department to Atari ST hardware and software.

Abundant Product

For the U.K. Atarians, the world looked bright. Lots of product, since a major share of what Atari Corporation produced was going to Europe instead of the U.S. (partly because the U.K. doesn't lay the same kind of FCC radiation restrictions on home computers that stateside computer companies have to comply with). The Amiga was almost dead. Its debut in the U.K. had gone largely unnoticed by the buying public and Commodore's financial problems were legend.

Some of the most reliable gages of public support were the magazines, and there were five--count 'em, five!--Atari ST specific magazines and others that included the ST along with other brands. The magazines were a wealth of information. There was an incredible amount of third-party hardware being developed in Germany and the U.K. for the Atari--not all of it suitable for export to the U.S.. It was a vibrant and vital market nourished, as it were, at the expense of dealers in the U.S.. Even then, however, there were signs of fragility.

The home computer market in the U.K. has never been what it is in the U.S. In the first place, the population of the U.K. (and, thus, that segment willing to buy a home computer) is considerably smaller, and a home computer costs considerably more. Normally, computer products in the U.K. equate roughly on an equal basis, dollar to pound sterling. By that I mean, if a piece of hardware (or software) costs $100 in the U.S., in the U.K. it will probably cost 100 pounds (about $140 to $150). More telling, however, was the fact that even in Atari's heyday they were never able to seriously penetrate the U.K. business market. The success of Atari in Germany simply did not occur in the U.K.--just as it hasn't in the U.S.

The Electric Wine Sours

The rosy home computer picture began to turn sour about two years ago. Amiga made a major comeback and captured the imagination of the buying public. Many of those brilliant young hackers who continuously push the envelope were suddenly buying Amigas instead of Ataris. Stores, such as Selfridges, reported that the Amiga was outselling the ST more than 2:1. There weren't quite as many Atari ST computers in the Tottenham Court Road shop windows as there had been only a year before. Atari and Commodore were waging "bundle wars," where the purchase of a computer was bundled with up to a score of useful (but slightly outdated) software packages. The Amiga was winning this competition, too. There were fewer Atari ST magazines and there seemed to be more Amiga magazines every day.

Windows Without Atari

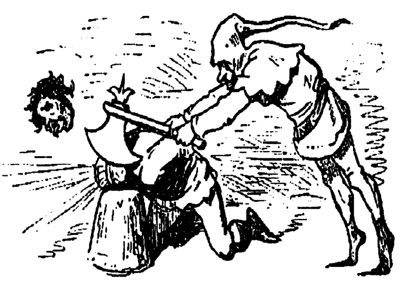
This year things were even worse. None of the small Tottenham Court Road shops display the Atari ST in their windows, although almost all of them conspicuously display the Amiga. A few of the stores still carry Atari software, but most of it is out of date and heavily discounted. It seems obvious that these stores won't be carrying any Atari products when I am next in London. Silica House, long a major Atari retailer, is one of two dealers I found that still carries Atari hardware. They also handle Amigas and IBM clones. The other Atari retailer is the computer department of Selfridges department store. The computer department of Selfridges is actually run by Silica House so it amounts to another Silica House shop. Silica House still has a decent amount of Atari software but the majority of it is games now. The number of productivity packages has really declined in the last two years--a sign that serious users are declining.

Nobody Seemed to Care

As for hardware, Silica House has that, too. They had two ST^E's on display--one a 4-Meg variety along one side wall near the back. And they had a full-up TT. I could hardly believe it. It was upstairs at the very back of the showroom with no literature and no software demo--just the desktop to play with. I sat down and played with it for nearly an hour. Not once did a salesman show any interest in me. I walked out of the store without anyone even suggesting that it was for sale. On the other hand, there was plenty of help for anyone interested in the Amiga 3000s at the front of the showroom and the 386's just behind them.

Discouraged, I made my yearly trek to the Virgin Games Store just up Oxford Street. For anyone looking for boardgames, historical or fantasy miniatures, or computer or home entertainment games, the Virgin Games store is a sort of Mecca. They have everything. Period. If it's for sale, they have it. If it's not for sale, they can special order it. The staff is knowledgeable, curt, and so cool you'd think you were in a French restaurant. Still, it's one more way to take Atari's pulse in the only market that still seems viable.

Sure enough, they still had ST games software, and lots of it. They had 2 big racks that reached from the floor nearly six feet high in a corner along the back wall. Of course, the MacIntosh (not a major player in the games market) had a single rack nearby. The Commodore and Apple II had a couple of racks each and the IBM had about four racks (two in 5.25" disk format and nearly two more in 3.5" disk format). The biggest? You guessed it. It was the Amiga with five full racks of software at the front of the store. Surprised? I was not. The war is over in the U.K. and the Amiga has won. Hands down. It is evident elsewhere, too.



Amiga Wins The War In London

There are now only two ST-specific magazines in the U.K. and one of them just went back to quarterly publication. There are still a few that cover the ST along with all the others, but there just doesn't seem to be that much Atari news anymore. And what there is isn't always good. Generally, you have to search through what appears to be a couple of dozen Amiga magazines to find the Atari magazines now.

Bleak Street

Can Atari still turn things around in the U.K.? I wish I could be more optimistic than I am about it, but the outlook was bleak. The home computer market in the U.K. is small anyway and recession is more than a rumor there, too. What glitter there is seems associated with the Amiga and the IBM clones. The venerable ST simply can't compete with the new power machines. The ST^E just isn't in the same league with a 386DX-based machine--or an Amiga 3000, for that matter. The TT hasn't been produced in enough quantity, advertised sufficiently, priced competitively, or downward compatible with enough competitive software to make it a viable alternative, in my view.

In general, I believe the hardware market in the U.K. is flat, if not moribund, and the trend is continuing. Software sales look to be falling but still decent in the games area, at least for now. The future just doesn't look promising and Atari doesn't appear to have the resources or the will to rescue the situation. It may not be possible anyway. I did not set out to write a "gloom and doom" piece; however, I do feel this an accurate assessment of the Atari situation in the U.K. For U.S. retailers, the U.K. situation may be viewed favorably since more Atari product should be available for sale here. Still, in the long run, the situation in the U.K. will certainly impact us unfavorably if it hasn't already done so. I don't think we can say with any confidence that it won't be over over here 'till it's over over there.

TIME TO RENEW?

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STARTING BLOCK

by Richard Gunter

More on Informer II

A Little Recap

Before the summer break, we discussed my initial impressions of *Informer II*, the database program from Soft-Aware Unlimited. I stated then that I didn't consider this to be a viable database manager for professional use, and that opinion still holds. However, *Informer II* is quite simple to operate; thus it may be an acceptable choice for personal use, especially for those who don't go in for exotic applications.

As you may recall, this product offers some ability to access images as well as more conventional data types (character strings, dates/ times, and numbers).

Loading Data

Let's take a closer look at that ease of use by setting up a small database. There are two possible situations to consider. You may already have a database in some other format or you may have (or can build) an ASCII file containing your data. The other possibility is that you're starting from scratch with nothing but an idea.

Informer II comes with a conversion utility *(TOINFRMR.PRG)* which is capable of importing data from *DB Master One, Habaview,* and *Data Manager ST* databases. I didn't test this program; instead, I used *Informer II* directly to load data from an ASCII file.

The table shows a sample of the data I started with, arranged in columns so we can discuss it more easily.

My data was taken from a short form file listing of the ARMUDIC BBS download library. I constructed the file (with the aid of *Word Perfect* macros) from an on-line text capture. The first column is the file number used for requesting a download; the second column is the file name; third, the file size; fourth, the number of downloads; fifth, the upload date; and the sixth column is a short description of the file. Each of these columns is intended to become a column (or item) in my database. Each item is followed by a comma, and the alphanumeric items are bracketed by quotes ("). The fifth column is intended to become a date item in the database, but it now looks like a six-digit number with leading zeros in the form MMDDYY.

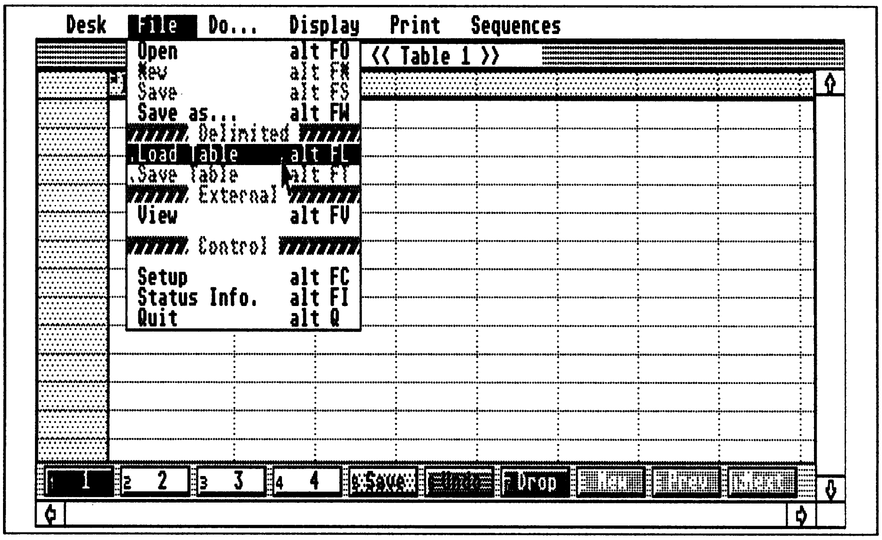
```
27,  "TRAIN.GIF",      9600,    3,   092789,  "GIF picture of a train engine."
28,  "BUSHPORT.GIF",   53120,   16,  092789,  "Portrait of our President."
29,  "LEMGIF.GIF",     18048,   9,   092789,  "I'm not sure the Lunar Lander"
31,  "VIDEOBOX.SEQ",   84992,   5,   011390,  "Use Animate 4...A ball bouncing"
32,  "WALK.SEQ",       106496,  4,   011390,  "A man walking in circles witho"
33,  "XZY.TTP",        20992,   0,   012190,  "xyz.ttp is to be used with tin"
```

Sample Data

Informer II is picky about the file format; in fact, it doesn't like the spaces between items in the table. The file needs to have all the excess spaces squeezed out (another WP macro).

After constructing the data file, the next step is to run *Informer II* and load it. You'll spend most of your time on the LIST screen, which is the first one that appears when you run the program. It shows an array of rows and columns, with the usual GEM scrolling features. The figure above shows the screen just before loading the data file.

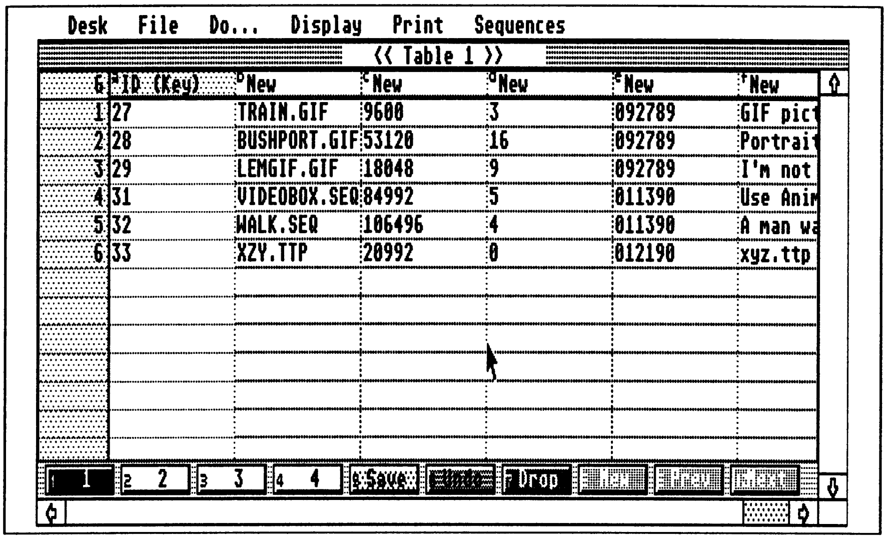
Hidden behind the dropdown menu is the default (empty) LIST screen, showing only one data item: a required key, or index. The key should be the first field in your data file. When I click on the "Load Table" option and select my input file, *Informer II* loads the data and displays the screen shown at the top of the next page. The data are all loaded, but spacing and data types are not yet what I want.



Ready to Load Data

Setting Attributes

Double-click on a column heading, such as "ID (Key)," and the ATTRIBUTES dialog box

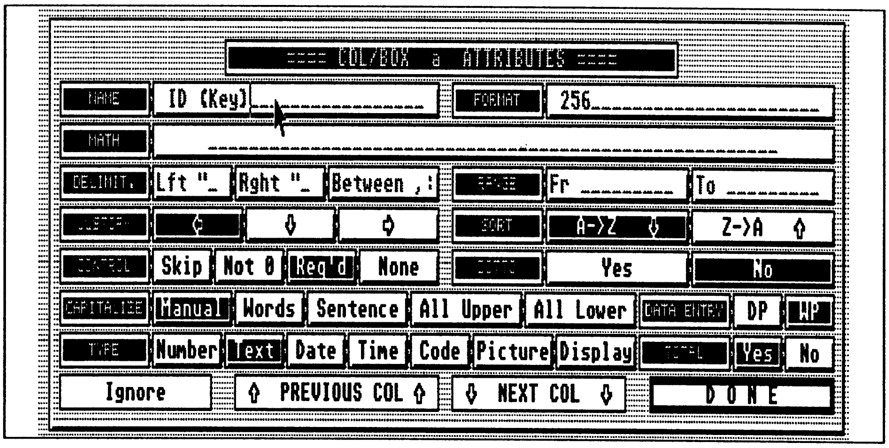


6	ID (Key)	New	New	New	New	New
1	27	TRAIN.GIF	9600	3	092789	GIF pic
2	28	BUSHPORT.GIF	53120	16	092789	Portrai
3	29	LEMGIF.GIF	18048	9	092789	I'm not
4	31	VIDEOBOX.SEQ	84992	5	011390	Use Anir
5	32	WALK.SEQ	106496	4	011390	A man wa
6	33	XZY.TTP	20992	0	012190	xyz.ttp

Data Load Complete

appears. In the illustration (next page), I am about to rename the column by editing its title (at the arrow pointer). Next, I put an appropriate code in the format field (zzz9 indicating a four-digit number displayed with leading blanks). I clicked on the "Number" box on the "TYPE" line, and left the other options alone.

I proceeded from one data column to the next via the buttons on the bottom row of the dialog. Returning to the LIST screen by clicking on the DONE button, I adjusted the size of each column by placing the cursor at the right of the column and dragging the mouse to increase or decrease displayed width. Changing the order of presentation was another mouse drag operation.


==== COL/BOX a ATTRIBUTES ====
MATH
DELIMIT. Lft " Rght " Between ,
Fr To
SORT A->Z Z->A
Skip Not 0 Req'd None
Yes No
CAPITALIZE Manual Words Sentence All Upper All Lower
DATA ENTRY DP WP
TYPE Number Text Date Time Code Picture Display
Yes No
Ignore
PREVIOUS COL
NEXT COL
DONE

NAME ID (Key)
FORMAT 256

The Attributes Dialog

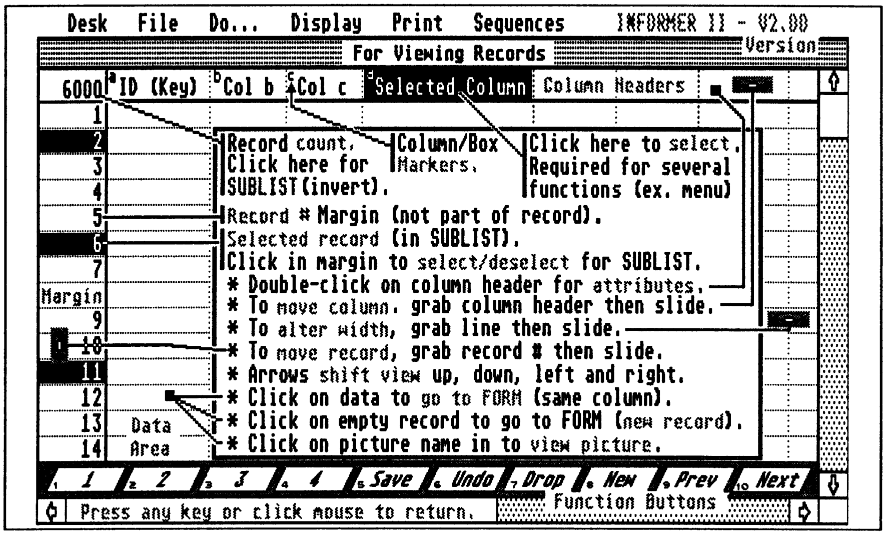
Remember that date? When setting the date column's attributes, I just selected the "Date" type and set the format field to "MM/DD/YY". That's all there is to it. My database is ready to use. (See illustration at the end of this article).

Help

Perhaps because there's already code in the program to handle picture files, the developers of *Informer II* chose to use pictures as the help medium. While viewing the LIST screen, pressing the HELP key twice will bring up the picture named HELPLIST (illustrated below).

In medium resolution, some of the help displays get so busy they're hard to read. One doesn't need a whole lot of help anyway.

There's also a tutorial disk in the package, and Chapters 5 and 6 of the manual are devoted to practice sessions. As is my wont, I didn't bother working through all of that stuff; cheated by looking for portions that I needed.



Record count. Click here for SUBLIST (invert).

Column/Box Markers.

Click here to select. Required for several functions (ex. menu)

Record # Margin (not part of record).

Selected record (in SUBLIST).

Click in margin to select/deselect for SUBLIST.

- Double-click on column header for attributes.
- To move column. grab column header then slide.
- To alter width, grab line then slide.
- To move record, grab record # then slide.
- Arrows shift view up, down, left and right.
- Click on data to go to FORM (same column).
- Click on empty record to go to FORM (new record).
- Click on picture name in to view picture.

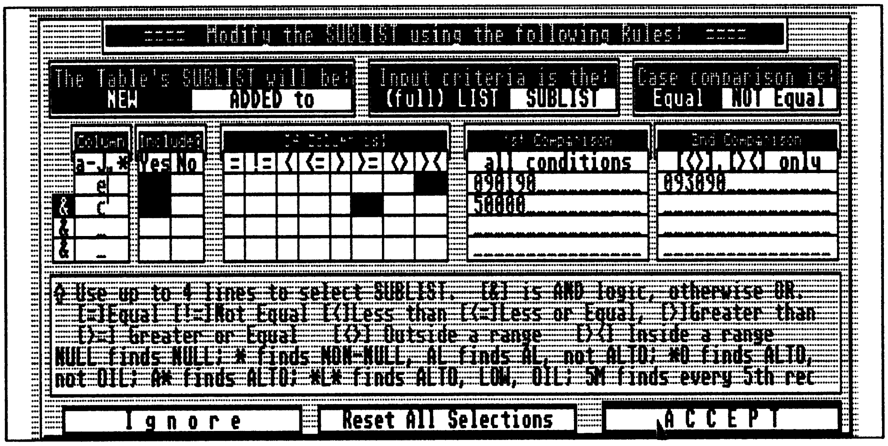
Press any key or click mouse to return.

Main Help Screen

Sorting, Sublist, and Reports

Simple sorts couldn't be easier; on the LIST screen, just single-click on a column heading (it will invert). On the DO... dropdown menu select the sort option, and *Informer II* will do its thing. To reverse the sort order, go to the attributes dialog box and click on the appropriate direction at the SORT button.

Multiple column sorts are supported on the SEQUENCES dropdown menu. The data entry screen (FORM) appears, and you just click on the items you want sorted in the desired sort order. I won't say much



Column	1st Comparison	2nd Comparison
e	090190	093090
c	50000	

Use up to 4 lines to select SUBLIST. [&] is AND logic, otherwise OR.
[=]Equal [!=]Not Equal [<]Less than [<=]Less or Equal, [>]Greater than
[>=] Greater or Equal [<>] Outside a range [><] Inside a range
NULL finds NULL; * finds NON-NULL, AL finds AL, not ALTO; *O finds ALTO, not OIL; A* finds ALTO; *L* finds ALTO, LOW, OIL; 5M finds every 5th rec

Modify Sublist (Search dialog)

about the FORM screen. It can be arranged and the fields sized by mouse drags, and it's used for manual data entry. You can also use a picture as a background, and it's the area where picture objects can be displayed.

Searches are done with the MODIFY THE SUBLIST option (DO... dropdown). A dialog box appears and you identify the columns you want searched, and the search options (see below). Search results are shown in a SUBLIST window, which is laid out just like the main LIST window, but shows only the selected subset of data.

Sublists have a few quirks. Each column has a fixed letter associated with it and you must remember which is which. Also, date ranges are sensitive to the way you specify the values. You can't use /, and you must use leading zeros. Ranges also do not include the end points. Thus, if I specify 090190 and 093090 as the end points of a date range, I won't find any rows dated 9/1/90 or 9/30/90.

You can sort a sublist. Well, that's what it looks like you're doing, but you aren't. Running a sort from either the LIST or the SUBLIST window actually sorts the entire table. You won't save any time by making a sublist, then sorting it. In a way, this is kind of handy because of the unique relationship between a sublist and the full table. If you return to the LIST window and scroll through it, you'll see each row in the sublist highlighted in the extreme left-hand column of the full list. In fact, you can add or remove rows from the sublist with a mouse click on the LIST window.

REPORTS just print all columns of the list (or sublist). To exclude any column from the display and from the report, just double-click on it. The space occupied by that column in the LIST window will be masked out and eliminated entirely in a report. There's also an ability to produce a custom formatted output, e.g., a mailing list.

Glitches

I didn't find many. I did experience a few intermittent bombs. Exact cause unknown, but I suspect an interaction involving *Word Perfect*, *Hotwire*, and *CodeRam* (the CodeHead ramdisk). I didn't experience any problems unless I'd been using word processing and other things quite a bit.

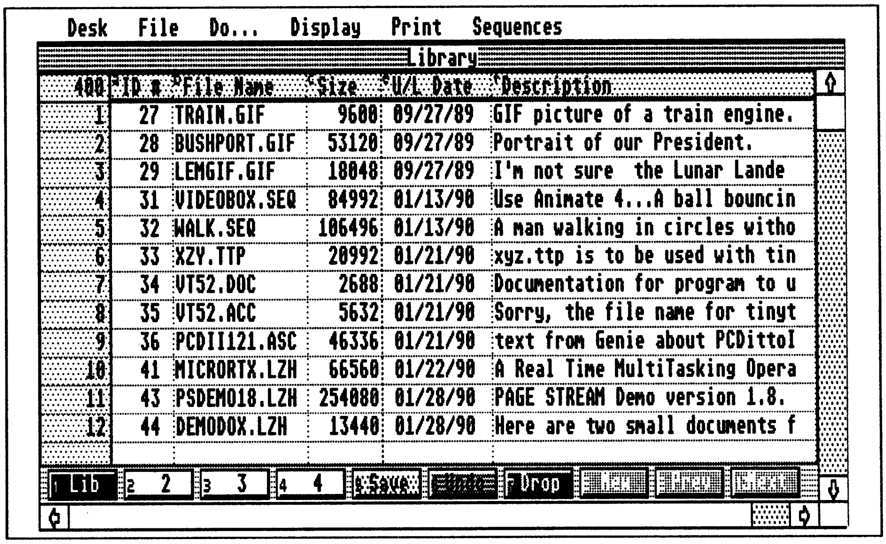
When printing a report to a file, don't write to the same file name that you've previously used. Erase the earlier version **before** writing the next report. *Informer II* seems to write over an existing file. If the second report is shorter, the file will contain trailing garbage.

Sorting response time varied. My Mega 2/4 ST with TOS 1.4 took about 4 seconds to sort 400 records using the key (ID) column. Sorting on the date, however, took 30 seconds whil sorting by file name took 6 seconds. Moral: *Informer II* won't be too quick with lots of records and sorting. Even so, it leaves *VIP Professional* panting in the dust with the same data. And it's far more flexible.

Wrapup

There's not enough space here to discuss details of everything the program can do, but I hope I've given you a general feel for it. If you're interested in *Informer II*, try to get the Demo disk. It's a self-running demonstration that takes an hour or two to watch in full.

Overall, *Informer II* should satisfy my simple at-home needs; I have no need for a professional level package, and *Informer II* is simple enough that I can put it aside for a while without much danger of forgetting how to use it.



400	ID #	File Name	Size	U/L Date	Description
1	27	TRAIN.GIF	9600	09/27/89	GIF picture of a train engine.
2	28	BUSHPORT.GIF	53120	09/27/89	Portrait of our President.
3	29	LEMGIF.GIF	18048	09/27/89	I'm not sure the Lunar Lande
4	31	VIDEOBOX.SEQ	84992	01/13/90	Use Animate 4...A ball bouncin
5	32	WALK.SEQ	106496	01/13/90	A man walking in circles witho
6	33	XZY.TTP	20992	01/21/90	xyz.ttp is to be used with tin
7	34	VT52.DOC	2688	01/21/90	Documentation for program to u
8	35	VT52.ACC	5632	01/21/90	Sorry, the file name for tinyt
9	36	PCDII121.ASC	46336	01/21/90	text from Genie about PCDittoI
10	41	MICRORTX.LZH	66560	01/22/90	A Real Time MultiTasking Opera
11	43	PSDEMO18.LZH	254080	01/28/90	PAGE STREAM Demo version 1.8.
12	44	DEMODOX.LZH	13440	01/28/90	Here are two small documents f

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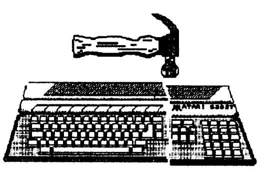


by J. Andrzej Wrotniak

Standardize Your Keyboard Commands

New DC DesKey Makes the Job Easy

Every time I start using another word processor or text editor (including those with programming language systems), I suffer. The keyboard sequences assigned to various operations differ greatly from program to program. Thus, for example, a Control-Y combination may delete a line in one program, delete the part of the line to the right of the cursor in another, or cut a marked block of text in yet another.

Having to memorize the keyboard commands for each text program we use is a pain. Wouldn't it be nice if your BASIC shell could be customized to use the same sequences as your favorite word processor?

Unfortunately, the designer/programmers of word processors and/or text editors lack imagination. These guys would never suspect that you may be switching between their program and anything else. Believe me, designing a word processor so that its keyboard functions can be re-assigned (for example, with a small stand-alone utility), does not take much work at all. Why is it that only *Tempus II* allows us to do that?

STartKey, published a few years ago by the *STart* magazine, is a small memory-resident utility, sitting on top of the operating system, intercepting your keystrokes, and translating them appropriately for various editors. This program, however, was never quite finished: it was rather buggy, crashing from time to time, and not too convenient to use.

DC DesKey—A Small Program That Is Hard to Live Without

Then the people from Double Click Software included a similar program, *DC DesKey*, into their *DC Utilities*. Unfortunately, the original release would not work under *NeoDesk*, and if something does not work under *NeoDesk*, then I do not touch it. Fortunately, a new version of *DC Utilities* has been just released, with the compatibility problem fixed, and, for just one dollar, I was able to update my disk.

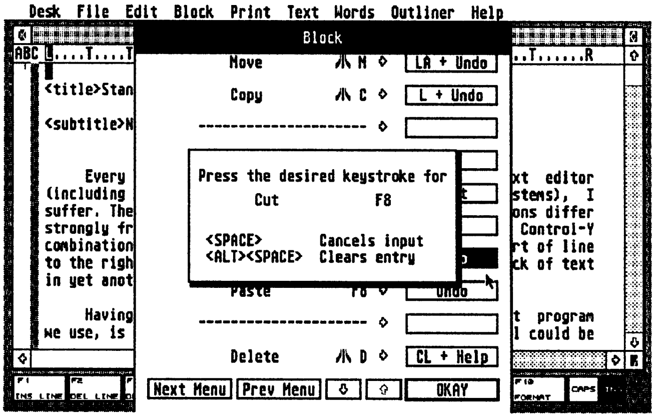
The new *DC DesKey* Version 3.0 does, indeed, work with *NeoDesk*, and it works quite nicely. All you need to do is to put it together with your other desktop accessories and reboot your computer. Then, while in the editor or word processor you want to customize, call *DC DesKey* from the Desk menu. A dialogue box will show up, from where (in addition to some other options) you may switch to keyboard remapping, or to assigning keystrokes to menu entries.

Remapping the keyboard is simple and straightforward. Just click on the "from" box and, when asked to, press the key combination you want to use when running the program. Then click on the "to" box and enter the key combination into which the original one will be translated. Thus, for example, if your program uses a Control-Y to delete a line, and you would rather use Control-Delete, then enter the Control-Delete as "from," and Control-Y as "to"—it couldn't be easier. Repeat as necessary.

Assigning keystrokes to menu entries is equally easy (although, I think, it required more technical ingenuity from Mr. Michael B. Vederman who wrote the program). *DC DesKey* will roam the computer memory until it finds the menu of the application you are customizing (and currently running). This menu will be presented as a part of another dialogue box. Click on a menu entry, then enter the key combination you want to assign to it. Neat and simple.

The very first night of using the program I remapped the basic editor functions for *Word Writer*, *First Word Plus*, *Prospero Workbench* and *Publisher ST*. What a relief—all these programs now respond to my keystrokes in a similar fashion (provided they have the function, that is). I have been using *DC DesKey* for more than two weeks now, and the darned thing seems to work fine—with just a few glitches (see below).

Mr. Vederman has also thrown in a couple of other, maybe less important but equally nice, features:



Press the desired keystroke for
Cut F8

<SPACE> Cancels input
<ALT><SPACE> Clears entry

Figure 1. Here is the dialogue you use to translate keystrokes into menu operations for the program you are currently in. Convenient and easy.

a command can be executed automatically each time an application is entered, and another one (as, for example, "save to disk") at fixed time intervals.

What I like about *DC DesKey* is that it performs the keystroke translation only when inside the program for which a given translation table was designed. You do not have to activate it manually before running an application and de-activate after returning to the desktop. *DC DesKey* will automatically check whether the program you are running has its own translation table, and, if it does, the table will be loaded and used while in that program.

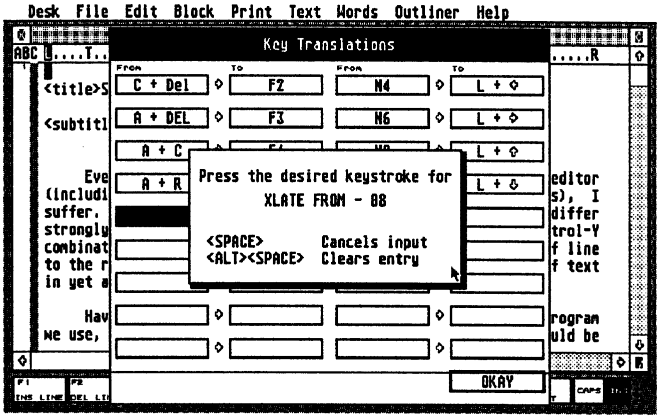
The translation tables are stored (as files with a .DK3 extension) in two possible places: either in one indicated directory or each table together with its corresponding application. The second solution is a virtual necessity when working on a floppy-based installation, while the first one seems to be more convenient for hard drive users.

Complaints? Yes, of Course!

One of my complaints (and a mild one, indeed) is related to the last feature: when storing my .DK3 files together with the programs they relate to, everything is just fine until an application executes another one (like, for example, running a program under development from a compiler shell, or calling a de-archiver from a terminal program). If the child program is in a directory different than that of its parent, then after its completion (returning to the parent, that is), *DC DesKey* will not find the parent's .DK3 file. As these files cannot be reloaded manually, the only option is to exit to the desktop and to execute the parent again, which is a mildly annoying procedure. Luckily, if you have a hard drive, then you will usually store all the .DK3 files in their own directory, so the problem will become entirely irrelevant.

My second complaint is related to a puzzling and irritating misbehavior: sometimes *DC DesKey* will insist on inverting your screen colors (in monochrome at least, and under *NeoDesk*) every time you leave *any* program. By "sometimes" I mean in some boot-up configurations. I was not able to identify a single desktop accessory (or other memory-resident program) with which it happens: if with a given combination of accessories the problem does not occur, then chances are that adding *any* accessory will cause the effect to show up. Then, again, removing *any* accessory from the set-up will give a better than 50/50 chance to bring things back to normal. Note: this is nothing critical, just annoying, and may be something limited to my version of TOS (1.4), but still.

A somewhat peculiar, but less frequent glitch of the same kind: sometimes *DC DesKey* will not register at all as an accessory in the Desk menu. Probably some timing-critical feature, usually a simple re-boot will correct the situation.



Press the desired keystroke for
XLATE FROM - 08

<SPACE> Cancels input
<ALT><SPACE> Clears entry

Figure 2. Keystroke–to–keystroke conversions are equally easy to define. Yes, I would like to see double keystroke sequences on the right–hand side, too, and I hope DC Software will include this in the next version.

Last, but not least, both *Uniterm* and *Interlink* started crashing when working with *DC DesKey* installed (as a matter of fact, *Interlink* would never go beyond the initial password entry). As much as I like and use *Uniterm*, the program seems to be quite picky about whom it co-resides with in the memory, so this is nothing new, but this is the first case I experienced with *InterLink* flatly refusing to work with a desk accessory (and yes, I have tried some).

More Pros than Cons

As I have already stated, the program is designed nicely around a well-defined task. However, I would be happier with *DC DesKey* if it allowed me to translate single key combinations into sequences of two (maybe even three) keystrokes: many editors use two-key combinations for some of the functions (for example, Alt-B and then K to mark a block end). This would not, I believe, complicate the program too much, while increasing its usefulness considerably. In a similar fashion, it would be nice to have an option to translate keystrokes into some basic GEM events (like clicking on the window scroll bar) other than menu messages; the *STartKey* accessory does it, and I found this feature quite useful with some programs.

Do not let me mislead you. I like *DC DesKey* as it is now, and I find it really useful, as it fills a small but painful gap in my utility library. The list of complaints and enhancements presented above is quite short. The program is doing what it is supposed to do, and it does it quite well.

Taking into consideration that *DC DesKey* comes as a part of *DC Utilities* ($40, usually sold for less), with some other programs deserving your consideration included into the package, those of us who use more than one editor and/or word processor will find it a very handy accessory.

Other Goodies in the DC Utilities Package

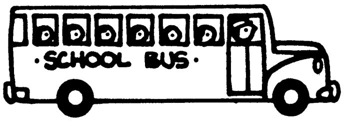
I already wrote about some other programs in the *DC Utilities* package in the January, 1990 issue of *Current Notes*. The following, depending on your needs and working habits, may range from useful to absolutely necessary:

DC Xtract Plus—a fast and easy to use archiver and dearchiver.Handles .ARC, .LZH, .ZIP and .ZOO formats, and, indeed, I prefer this program to its PD/ shareware competition.

DC Squish—compresses your programs and accessories on disk (significant space savings!) so that they automatically decompress upon execution. Again, better and more reliable than any comparable freeware programs. I consider this one a must.

DC Freeze Frame—a snapshot utility (this new version handles properly the compressed Degas formats).

Together with *DC DesKey*, the price-to-performance ratio of *DC Utilities* makes the package quite difficult to resist.



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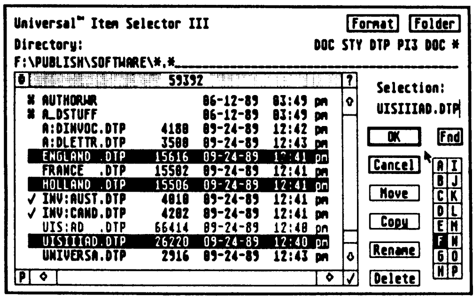

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   A:DINVOC.DTP      4100    09-24-89  12:42 pm
   A:DLETTR.DTP      3500    09-24-89  12:43 pm
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   UIS:AD  .DTP     66414    09-24-89  12:40 pm
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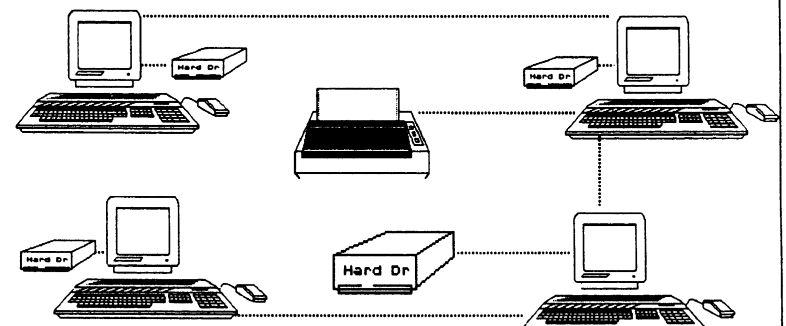

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Awesome Bargains!!

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Bare Bones Software

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• Huntington, West Virginia 25701 •

PageStream 2.1: It's Worth It

(C) 1991 David C. Troy

Hello

Well, it's been a while and a lot has happened. Most notably, I finally got *PageStream 2.1*, and it's great. And it's caused me to buy a PostScript laser printer. Which is what this article was printed with. And it was expensive. But did you see the Toad Computers ad? It's been worth it. People from all over the world have been calling me up and asking, "How in the word did you get Copperplate Gothic onto an ST an dprint it at 1270 dpi?" And it was easy. Sort of. Crouch down beside me, and listen to a long and sometimes frightening tale of fonts, *PageStream*, and eventual happiness.

Fonts

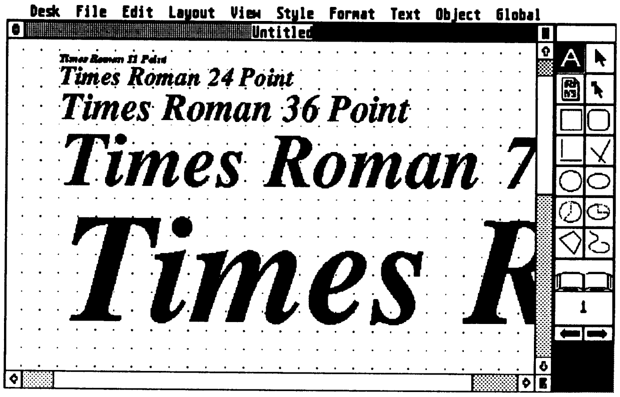
What are fonts? The name comes from the word font, meaning a bowl for holy water, which comes from the word fount, meaning fountain. So think of fonts as a fountain — of the water you need to make your crops grow and the letters you need to make up your pages. Without fonts, desktop publishing would be a real desert. Just like your crops would be without water.

The only problem is that fonts, just like water, come in a bunch of different flavors. **Evian:** Adobe Type 1 Fonts. **Perrier:** Compugraphic Intellifonts. **Poland Spring:** PostScript Type 3 Fonts. **Store Brand:** *PageStream* fonts. **Ice Chunks:** Bitmapped fonts. *PageStream 2.1* will use all of these, in one way or another.

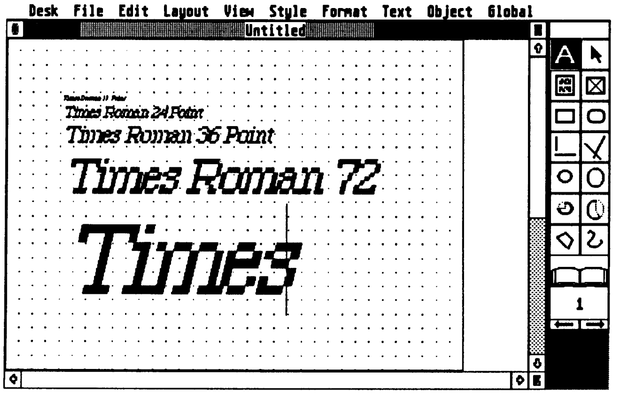
Fonts, first off, can be divided into two types (no pun intended): outline and bitmapped. Outline fonts consist of a series of equations and commands which describe computable curves. Bitmapped fonts are like letters made out of LEGO blocks, like *GDOS* fonts are. Observe these two scenarios; you're a fly on the wall in your DTP program. All we want to do is get a capital E in Times Roman at 12 points and at 128 points.

Bitmapped Font: Ok? Let's see here, you want a 12 point E? Let's see here — we've got Times Roman at 12 points, sure 'nough. There we go. Big E. We're just gonna copy that thing dot by dot onto yer page for ya. Ok. You say you need 128 points? That's not a regular size, sir. You understand we'll have to make that up custom, don't ya? That's really not what we do here. Let me ask the owner if we can do it for ya. He says yeah, just don't 'xpect it to look real good. We're gonna *enlarge* the next smaller one. It'll take a minute. You want us to do it? Ok. It's you page. I'm not gonna argue with ya. Owner says just to do it in a standard size, but you know what you want. Well, the closest thing we've got is 64 points. 128 points is double 64 points, so that'll be right fine. We'll just take each dot from the 64 point one and make it be twice as big horizontally and twice as big vertically. Sir — before I get all finished with this here, look at it. You see those blocky spaces along the curves — we call those jaggies 'round here. Can't help it when you're enlargin' somethin' like that. That's what you want? Ok. Just checkin'. Alright, I guess I'm done. Sir, I'm awful sorry about that big E — it's just the way it happens. Ok, so long as you're happy.

Outline Font: It shouldn't be any problem makin' you a 12 point and 128 point E, sir. It'll just take us a minute. You might say we're kinda craftsmanly around here. We take these letters real serious — kinda like art. We got instructions we follow real careful. Do it like a colorin' book. We follow these instructions to make you the **outlines** of yer E's, and then we just paint the insides in. The letters always look right nice. See, we follow the same instructions for the 12 point E as we do for the 128 point one, it's just a question of how big we make it. See here, on the 12 point one, we start in one corner. The instructions say make a straight line for a few millimeters, then start curvin' to yer left, and follow this math equation to figure our yer curve. When ya get to a certain point in the curve, make another straight line, and ya get the idea. It's just bigger with the 128 point one. And the curves are as smooth as can be. As smooth as we can get with this here printer, ya see. I know it takes us a while, but we do a real fine job, I feel.



PageStream 2.1 Screen Shot



PageStream 1.8 Equivalent Screen Shot

Now that you know how these fonts are created, let's discuss each individual flavor of fonts.

Adobe Type 1 Fonts are the most pervasive outline fonts. There are over 10,000 Type 1 fonts today. The format was created a couple of years ago by Adobe, the makers of PostScript, as a standard font format for use with their *Adobe Type Manager* software on the Macintosh and IBM. Adobe didn't release the font format. So no one but Adobe could make these fonts. And these fonts were inherently better, because they contained code called **hinting** which enhances letters at small point sizes. For instance, if you make your 12 point E, and the stem along the left hand side of the E is computed to be too thin to show up on your 300 dpi printer, then without hinting, it wouldn't show up. But the hinting says, "Hey wait a minute, that E isn't going to look like an E if that stem doesn't show up, so you better put in a thin line just to make it look right." This helps the appearance of large bodies of text at small point sizes immensely. But Adobe did, in fact, release the specifics of this Type 1 format fairly recently, hence the ability for *PageStream 2.1* to use Type 1 fonts.

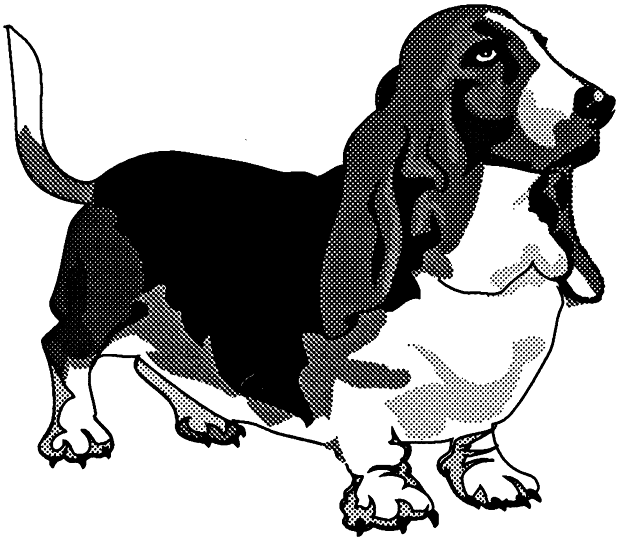
PageStream computes Type 1 font outlines on the fly, on screen, which gives a significantly better "what you see is what you get" effect. But the price here is speed. Computing these outlines is harder than doing the busywork of copying bitmaps, so drawing these fonts on screen can be a little slower. There is a solution, though.

A Type 1 font is made up of up to three files. There is the .PFB file. This contains the outlines — the directions — for all the characters in the font. Then there are the .AFM or .PFM (IBM *Windows* specific) files. They are the "font metrics" and they determine how far apart characters should be from other characters. For example, in this file, the relative width of the letter "A" is defined. The key to faster screen redraws is the .ABF file, which is a bitmapped version of the outline font. ABF files are not available for all fonts, but when used, screen redraws are much faster, especially at small point sizes. Remember, mangling a bitmap is easier than figuring out a curve. *Pagestream 2.1* uses all three of these files to give you optimum output on screen or printer (as good as possible on your output device) at the highest possible speed. Take note, though. Hinting will only work with true PostScript printers — and *UltraScript* won't print Type 1 fonts at all.

Compugraphic Intellifonts were created by Compugraphic, an anciently rooted type house. They make typesetters and related products. In fact, my first DTP experience was with a fer-real Compugraphic *Compuwriter Junior* photographic typesetting machine that lived in the basement. But Compugraphic makes fonts. And SoftLogik (the makers of *PageStream*) recommends that you buy and use these fonts if you're not printing to PostScript. They have two major benefits. First, *PageStream* sets up a font cache for Compugraphic fonts, which means that screen redraws, using outline fonts, go faster. And they're hinted, too, so they look as good as Type 1 fonts, even if you're not printing to PostScript. In fact, you can't print Compugraphic fonts to PostScript, unless your postscript printer contains equivalent fonts. *PageStream* comes with the Compugraphic CS Times Roman font, as well as the CS Triumvirate font, which are equivalent to PostScript Times Roman and Helvetica. So *PageStream* just treats those Compugraphic fonts as if they were the PostScript equivalents, which works just fine.

There are over 100 Compugraphic Intellifonts at this point, but one should take note that *Calamus* Compugraphic fonts will not work with *PageStream 2* because of variations in font file format and construction.

PageStream Fonts are fonts which were created for older versions of *PageStream*. There are probably five or six companies (for which I'm sure you've seen ads) who make these fonts, in their spare time in their basement and sell them. They're OK, but for the most part they lack the quality of Type 1 and Compugraphic fonts. The real advantage to the Adobe and Compugraphic fonts is that because these folks rely in a big way on font sales, they spend a heck of a lot of time making sure that these fonts are made of very highly detailed outlines. This ensures consistency at small and large type sizes. You'll find that a page of text in an Adobe font at 10 points will be a lot prettier than a page done in an equivalent *PageStream* font, whether you print the Adobe font using a real PostScript printer (to get hinting) or not.



A bassett hound imported directly into PageStream 2.1 from Mac Adobe Illustrator.

PageStream fonts are made up of several files. The .DMF file is similar to the Type 1 .PFB file. It contains outlines of all the characters in the font and those outlines are used for printing and for screen representation in version two. The .FM file is analogous to the Type 1 .AFM file and is a font metric file. They are not interchangeable but programs exist to convert from one to the other. There are .??H files (files with a two digit number and then an H in the extension), which are bitmapped screen fonts, just like the .ABF files. They can help to improve screen redraw times at small point sizes.

Older versions of *PageStream* used these .??H files exclusively for the screen, which meant fast screen redraws, but because they were bitmapped, large type sizes were often chunky and unreadable. Now, *PageStream 2* will use the .DMF outline file, when present, for screen representations. Again, this can be a bit slow, so bitmapped screen font files can still be used for screen redraws at small point sizes.

PostScript Type 3 Fonts are odd because they cannot be used for screen representations. They're pretty much the historical precursor to Type 1 fonts, but it's not possible to compute screen outlines from them on the fly. You must use a bitmapped screen font which matches up with a type three font. Older versions of *PageStream* used .PS files for Type 3 fonts which were pretty much conversions of .DMF files into PostScript, along with .??H screen fonts and a .PSF file. A .PSF file serves as glue to instruct *PageStream* to display a particular screen font and send a particular .PS Type 3 file when you refer to a particular font.

You may wonder why I'm spending so much time talking about fonts. You might get the impression that it's the only thing that has changed in 2.1. Well, that's just about true. What we're going to do now is look at four particular fonts, see what files you need for them and how you could use them on some different printers.

A PostScript Type 1 Font

ITC Kabel Book
ITC Kabel Medium FONT SAMPLE
ITC Kabel Demi
ITC Kabel Bold
ITC Kabel Ultra

Font Name:	ITC Kabel
Producer:	Adobe
Weights:	Book, Medium, Demi, Bold, Ultra
Files:	KABEL.PFB + KABEL.AFM KABELM.PFB + KABELM.AFM KABELD.PFB + KABELD.AFM KABELB.PFB + KABELB.AFM KABELU.PFB + KABELU.AFM

On a true PostScript printer (anything from my QMS PS-410 to a Linotronic), text in this font will print quickly and easily, with hinting included. Will not print to *UltraScript*, as *UltraScript* will only accept Type 3 font files. Dot matrix, deskjet/laserjet, and SLM804/605 output will be good and very fast, but will not include any hinting. Screen redraws, for small point sizes covering a large area, will be very slow without an .ABF file, which I don't have for this font. I wouldn't be surprised to see a .PFB to .ABF converter show up **very** shortly.

A Compugraphic Intellifont

CS Triumvirate Regular
CS Triumvirate Bold
CS Triumvirate Oblique
CS Triumvirate BoldOblique

Font Name:	CS Triumvirate
Producer:	Compugraphic, Included with *PageStream 2.1*
Weights:	Light, Bold, Oblique, BoldOblique
Files:	TRIUM.10H, TRIUM.12H, TRIUM.18H, TRIUM.24H, TRIUM.CG, TRIUM_B.CG TRIUM.PSF, TRIUMB.PSF, TRIUMBO.PSF TRIUMO.PSF

PostScript printers will not print Compugraphic fonts but, fortunately, this Compugraphic font is the same as PostScript's Helvetica. So it just uses that instead. That's what those .PSF files do for you. So, if you print a bunch of text to a postscript printer using this font, you'll get Helvetica. *UltraScript* will use this particular font, because it gets translated into PostScript Helvetica, but in general, without a .PS file, *UltraScript* will not use it. (See next example). Dot matrix, deskjet/laserjet, and SLM804/605, output will be quick and excellent with this font, and will include hinting. Screen redraws will be very fast because .??H bitmapped screen fonts are included for small point sizes and a font cache is used for the outlines at large point sizes.

A Different Compugraphic Intellifont

Garamond Antiqua
Garamond Antiqua Halbfett
Garamond Antiqua Kursiv
Garamond Antiqua Kursiv Halbfett

Font Name:	Garamond Antiqua
Producer:	Compugraphic, Included with *PageStream 2.1*
Weights:	Light, Halbfett, Kursiv, Kursiv Halbfett
Files:	GARA.CG, GARA_H.CG, GARA_K.CG GARA_KH.CG, GARA.PS, GARA_H.PS GARA_K.PS, GARA.PSF, GARA_H.PSF GARA_K.PSF

You may note that this is not a font which is typically built into a PostScript printer. You are right. And in order for a PostScript printer to print this font, you have to have those nasty .PS Type 3 files and .PSF headers. But it will print on a PostScript printer, although you lose hinting. Because it must download a Type 3 copy, *UltraScript* **will** print this font — again, without hinting. Dot matrix, deskjet/laserjet, and SLM804/605 output will be quick and good, as usual, and you will get hinting. Screen redraws will be fast, but not as fast at small point sizes as with Triumvirate, because no .??H files are included with this Garamond. But the font cache is still used for all sizes, making the speed more than tolerable.

A PageStream Font

Celtic
Celtic Bold (Manufactured)
Celtic Italic (Manufactured)
Celtic BoldItalic (Manufactured)

Font Name:	Celtic
Producer:	I Can't Remember, I Don't Recall
Weights:	Regular. Bold, Italic, Bold Italic available.
Files:	CELTIC.12H, CELTIC.DMF, CELTIC.FM, CELTIC.PS, CELTIC.PSF

This is a font I got while using *PageStream* version 1.82. To print to a PostScript printer, the .PS and .PSF files are no longer needed. *PageStream 2.1* manufactures a .PS Type 3 file from the .DMF file at print time file and sends it to the printer (or to disk if using UltraScript). Dot matrix, deskjet/laserjet, and SLM804/605 output will be clean and fast. What's hinting? These fonts know no hinting. Screen redraws will be reasonably fast. The .12H file is used for small text and the .DMF outline file will be used for larger sizes. Screen draw times, when using the .DMF file will be comparable to a Type 1 file. It's best to hang on to some .??H files for screen redraws. Note that the bold, italic, and bold italic weights are not defined for this font. This is frequently true with *PageStream* fonts, and as a result, those weights lack special details that could enhance the font in those styles. *PageStream* will create these styles from the basic style though, even if it's not as pretty.

That's All, Fonts!

That's every kind of font *PageStream 2.1* can support. Remember, though, fonts are fonts, more or less, and right now there are **lots** of programs which are springing up on the ST, Mac, and IBM which will convert between several different formats. I've told you the basic requirements for *PageStream 2.1* — it's up to you to find the fonts you want and get them in the best format for you. You might reference my "Myths and Mysteries" column in the March '91 CN as well as an excellent article by Chet Walters in ST Informer, February 1990 for more information on fonts and font conversion.

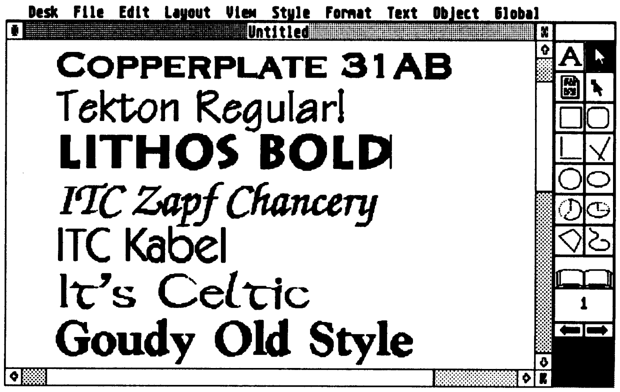
There are a couple of inferences you might have made from all this commentary about fonts. Here are my guesses at what they might be. 1) Don't expect anyone but SoftLogik to sell Compugraphic fonts that include non-standard .??H bitmapped screen fonts or .PS Type 3 files. 2) If you plan to use primarily PostScript (which is what all major service bureaus use), steer away from the Compugraphic fonts which won't work with PostScript. While screen redraws may be slower, you can usually find a way to get around it and it's probably worth it. When a .PFB to .ABF converter shows up, run with it. 3) You'll want to set up .??H screen fonts and .PSF files for fonts resident to your PostScript printer (or *UltraScript*). If you have these files from 1.82, they will work with 2.1. SoftLogik sells what they call the *PageStream Plus Pack*, for $75, (which is equivalent to the Adobe Plus Pack) which contains bitmapped & outlined screen fonts plus all .PSF files for the 35 standard Laserwriter fonts. 4) Getting a PostScript printer might be a good idea if you're going to be using primarily Type 1 fonts and printing Encapsulated PostScript graphics. You'll get hinting that way, and there will be no question about your ability to use EPS graphics.

Mac Type 1 Fonts are different from IBM Type 1 fonts. Mac Type 1 Fonts often don't include .AFM files, plus all Mac files have MacCrud stuck onto them and have to have their header ripped off and placed in "IBM" format to work with *PageStream*. If you use Mac software frequently and want to use the same fonts on *PageStream* as you do on the Mac, you need: 1) A way to transfer the font file to an ST disk. 2) A way to strip the Mac header from the file. There are a few programs available to do this. There is one called *MACIBM10.PRG* on GEnie. 3) An AFM file, either by creating one or copying one you have on the Mac. If you do have the Mac AFM file, you can convert it using Doug Wheeler's *Transverter*. A utility included with MegaType's *Font Designer Plus* will allow you to create an .AFM file, too. 4) Patience, love, and voodoo.

Other 2.1 Changes

Another important feature is the ability to display graphics from *Adobe Illustrator* (IBM or Mac). These graphics had been previously tough to display because of their encoding in Encapsulated PostScript (you just got a box with an X in it before), but the folks at SL have decoded PostScript once again. Any graphic created on Adobe Illustrator can be displayed on screen and printed to any non-postscript printer. Only very occasionally have I found any problem with this feature.

IBM TIFF EPS header graphics can be displayed and printed, too, but Mac TIFF EPS header graphics can't. This applies to programs other than Adobe Illustrator which can generate imbedded TIFF previews of EPS graphics. Standard IBM and Mac TIFF files can be displayed and printed, and greyscale TIFFs generated by the new Touch-Up can be imported also. GIF, *MacPaint*, and PCX files are also supported now.



COPPERPLATE 31AB
Tekton Regular!
LITHOS BOLD
ITC Zapf Chancery
ITC Kabel
It's Celtic
Goudy Old Style

A Sampling of Fonts from PageStream 2.1. All but the "Celtic" font are Adobe Type 1 Fonts — and even the Celtic font looks good!The real-world of fonts is starting to tempt you, isn't it?

On the TT030 computer, the 16 color 640 x 480 mode is supported, and enhances *PageStream's* ability to do full four-color separations by allowing on-screen coloring of objects. That looks nice. If you've seen SL's ads for 2.1, they have an EPS graphic in there that they've "colored" on the TT. And it looks good. Four color and spot color separations can be printed to any printer they support. Even dot matrix!

Tons of printers are supported. Everything from the Epson MX80 through color PostScript is supported. Standard PostScript disk files will work on Linotronic imagesetters, which is what your local service bureau probably has. So printing at 1270 or 2540 dpi on film or paper is a very simple process.

There are a lot of other features, too, but most haven't changed from *PageStream 1.82*. The program is still basically the same, only these few font upgrades make it much more useful. And the $75 upgrade fee to 2.1 is well worth it, as is the $179 street price for first time purchasers. And do you see the Toad Computers ad this month? Well, you guessed it, that was done with *PageStream 2.1*, and that's Copperplate Gothic 31AB from the Adobe Type library. And it was all printed on a Linotronic L200. And just so you know, this article was printed by yours truly on my QMS PS-410 directly from *PageStream 2.1* on a TT030, using ITC Garamond from the Adobe Type Library, which is my favorite text typeface and has been for the past year and a half.

Clean Up the Messe

That's where I'm headed — to defend justice, truth, and the American Way at the Duesseldorf Atari Messe. I'm tromping all over Europe, and I'm sure I will find something interesting to write about next time. So I'll see y'all then. In the meantime, if you want to get in touch with me:

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Small World

Pass It Forward

By David Small

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Lakewood

Little did you know that the people buying Spectre GCR's were doing something different with their money. For a long time, they helped handicapped people in Lakewood, a western part of Denver, to have a job. You see, we hired out a shop that specializes in employing handicapped people to do our circuit board assembly. (A specialized "PC Board Shop" must manufacture the raw printed circuit board, complete with copper traces and gold contact pins, out of a material I believe is related to fiberglass; then, the fun begins. Someone has to "stuff" it full of parts and solder those parts in. That's an "assembly shop." There are myriad possibilities for things to go wrong in an assembly shop.)

Incidentally, any USA assembly shop, including Lakewood's, costs *considerably more* than having PC boards wave-soldered over in Taiwan and shipped here. Having PC boards made just over the border in Mexico, in special zones with tax rates designed to bring in USA business, is cheaper still. (It would depress you to know how many people have told me to dump the Lakewood folks and go down to Ciudad Jaurez.) However, Denver needs the money, and within Denver, these people needed the jobs the most. They wanted to work and were willing to, but had no jobs lined up.

I have to tell you that, in my heart, I wasn't expecting anything more than average from this shop. I've seen board assembly shops of every caliber, from excellent to awful, in the last ten years, and I'm resigned to the usual routine. Murphy's law, parts supply problems, miscommunications, Raving Idiot Chip Supply (my nemesis!) and so on.

BUT: The Lakewood people did the finest job of assembly and soldering I have *ever* seen, period. The boards come off wave-solder. (A process where all the parts are stuffed in, then the board is run through the top of a pool of molten solder, with a "wave" in it set up by vibration that raises a small high-point solder wavetop for the boards to touch.) After soldering, our boards were hand-inspected under a magnifying glass, and any questionable joints were hand-resoldered. We also NEVER saw a board with a component "legs up" (where a part joggles out during soldering; it happens sometimes due to vibration, flotation, or whatever). And boards with questionable or plain bad traces, simply faulty PC boards, were tagged and marked for us; it was obvious that the boards were getting looked over very carefully. Often I'd look at a tagged PC board and couldn't find the bad trace for minutes!

The failure rate of these boards in the field was one in one hundred, which to me is excellent, given the complexity of the boards and the failure rate of the raw parts—I mean, a certain number of chips out of a batch of a thousand are going to be bad, period. Multiply that by the number of chips on the board, and you'll get an unavoidable failure rate. Anyway, I'm very happy with one in a hundred. (Also add to that what we call "pilot error." Many returned boards tested just fine and still do.)

We stayed with the Lakewood shop as long as they had time for us. (Indeed, we were their only business for a long period; the economy in the Denver area is still pretty ragged, after having self-destructed during the oil price crash, which Denver lost big on.) The manager told us we were the only business keeping them open in those days.

(It makes a strange postscript that we finally had to move to another assembly shop because the Lakewood shop landed a contract to produce large-capacity assault rifle magazines for things like the AR-15/M-16 or UZI, and they didn't have the people to do our board work anymore. It's, errr, different to see someone assembling a hundred or so M-16 magazines ... There's considerable demand for these mags because of legislation attempting to restrict/ban them before Congress right now.]

Still, I'm glad to have helped through the lean times.

Jamaica

Currently, users who buy Spectre GCR's are helping out people in Jamaica, whose economy needs all the help it can get. One of our fearless employees is starting a business there, and it looks like it's going to be a roaring success. I'll hear in two days the next progress report, but it sounds like it's going wonderfully. The business is about one American, many Jamaicans, giving employees decent salaries, and transferring income from USA tourists to Jamaicans). We're helping the employee out with some capital needed to get equipment and some computer horsepower in the form of a Mac II and LaserWriter we had, err, laying around. (Yes, it's true; we had to upgrade our equipment for speed reasons. It couldn't handle our database as our customer base grew. When it takes 20 minutes to sort a database, and 30 minutes to PostScriptize and print a newsletter, it's time for something faster.)

To keep things clear, this new business won't have *anything* to do with the ST, and is this person's own, to win or lose, not a Gadgets thing, ok? But this person, whom I'm keeping anonymous, helped us out a LOT during the rough, critical early days of Spectre, and it's one way of saying a heartfelt "THANKS!" Perhaps I can get an okay to tell you more about it sometime.

Why Do This?

Why do these things? Sure, they cost us money. Golly, I say to myself, if I went with a cheap board shop, used tin connectors instead of gold, refused to help out employees who had a dream, didn't send out free upgrade disks or newsletters, gee whillickers, I could make a little bit more in interest on some investment.

(And, mutter, pay it to the I.R.S. Mutter. Fracklesnatz fribble franger. This is a "G" rated magazine, though.) To be honest, many cartridges for the ST are built in this manner, A.C.A.P. (As Cheap As Possible). In fact, the ST is, in many ways, too, an ACAP architecture/implementation.

Sure, I *could* be like these people. But I really don't want to be that way. There's enough of those people to fill the needed slots (*chuckle*).

The money is insignificant to me compared to the good that can be done with it. Spectre (and other work I have done, to a much lesser extent) has spread out and touched many lives in some degree; when I get, oh, a letter from someone who has started a magazine because he could afford the ST and some fine Mac page-layout software, and a copy of the magazine, it fulfills me in a way I can't express in words ... and I couldn't tell you in a year's worth of columns what people do with Spectre GCR. When I feel down, I read the "Letters To Dave" box of letters from people who have taken time to say thanks for writing this thing, Dave. They didn't have to, but they sat down and wrote me.

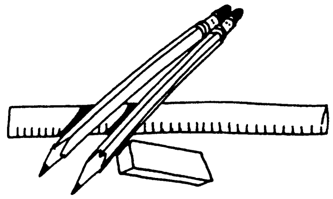
And look, no matter WHAT Atari Corporation does, that ST can now become a Mac, which has thousands of software packages, some among the best there are anywhere. That could end up being the best thing I ever did for the ST, particularly during these hard times. That sort of reason is why people buy insurance.

But in truth, I'm only where I am because many people took the time to give me things that can't be repaid. Dr. Kuder and Lee Maxwell at CSU saved my college career, period. While ultimately the CS degree didn't matter, it helped for a time. Sherwin Gooch taught me the Hacker's Ethic on PLATO long before the mass media redefined "hacker" to be something bad. ("Freedom of Information Exchange," if you want to know, is what a "hacker" is about). John Ridges and Phil Tubb of ALF products have long put up with me and know more about floppy disks than I *ever* will; I honestly believe John is simply the best individual with *both* hardware and software that I have ever met; it is extremely rare to find someone fluent in both, much less among the very best in either one. But John even stunned Dan Moore, who is way ahead of me in software, with a few of his creations. Those two ran my user group when I was in high school; I was lucky.

Jerry Pournelle has helped me a great deal. Putting it mildly, he doesn't need to; he has 10,000 other companies all vying for his time and column space. But he's taken the time to talk about many small business hackers with neat ideas, as much space as he devotes to Big Corpses (ooops, that's a typo. I'll leave it in. It fits my way of thinking), and as I know from writing columns, it's far easier NOT to take the time for the little companies; you can get much more material to fill a column from one big outfit.

And when I ask these people, heroes to me, what I can do to give something back, the reply is always the same: "Pass it forward." [Of course, mind you, if they needed something, they can just call ... I extensively tested Roberta Pournelle's Reading Program, and spent quite some time doing so, to give back just a little of what they'd done for me.] But I've heard "Pass it forward" so many times (worded differently but meaning the same thing) that I believe in it. Fine, fine people.

So, sure, it feels good to make someone's dream come true. It's an ego boost. But the important thing is to *pass itforward*. And I'll tell you something; it's a happy way to live.



CVG!

YES! Electronic Spinster Graphics not only offers the largest IMG clip-art collection available for the ST, it is now introducing a new Vector Clip-art collection! Disk 1, ***Frames, Rules & Borders*** is available now for an introductory price of only $12.00, (includes s&h). Disks to follow include Symbols & Icons, Christian Icons, and Holidays. To order, or to get the latest catalog, write to

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Lawrence, KS 66044

(Offer good until October 15,1991.)

The MegaST^{E}

The TT for the Rest of Us?

by John Hutchinson

When Atari's flagship computer, the awesome TT/030, was unveiled, there were untold "oohs" and "aahs" heard from Atari fans around the world. Long had we waited for the next generation of powerful Atari computers. The 32MHz 68030-powered TT was indeed a screamer and its enhanced graphic modes and plethora of industry standard ports enticed us to believe that the long wait was well served. But when we saw (gulp) the TT's price tag, we wondered what had happened to the once proud slogan of "Power Without The Price." Sure, the TT is a bargain compared to many other graphic workstations, but the minimum entry cost is a quantum leap from what dedicated Atari users were used to paying for ST's. What was needed was another machine to fill the niche between the low-end 1040ST^{E}/MegaST line and the ultra-powerful (and expensive) TT.

Well, take heart friends, for the powers at be in the hallowed halls of Atari have heard your pleas and have released a new machine which may well come to be considered the finest they have yet assembled--the MegaST^{E}! What makes this new machine such a potential winner? Let's start by checking out a few of its standard features:

- 16MHz 68000 w/cache
- 1, 2 or 4 Megabytes of RAM
- Built-in 50Mb hard drive (in the 2 and 4Mb versions)
- Easy-to-upgrade SIMM memory modules
- TOS 2.5
- Extensible Control Panel
- ST^{E} 4,096 color palette
- ST^{E} PCM stereo sound output
- VME expansion port
- LAN network port
- Blitter graphics chip
- TT-style case and detachable keyboard

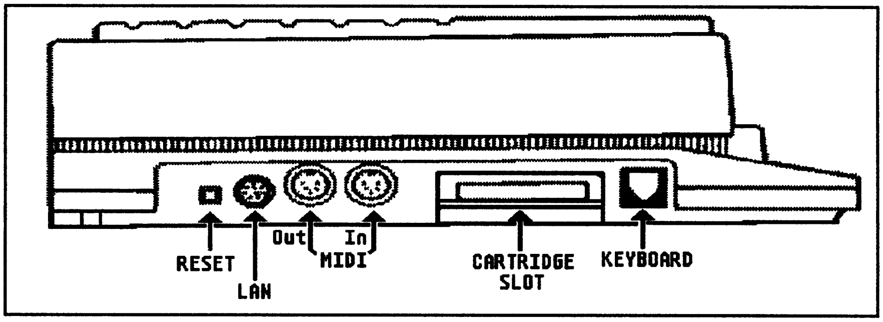


Figure 1. Left side panel ports.

The Wedding Cake Revisited

The MegaST^{E} is, in a word, BIG. Identical in style to the TT, the unitized case holds computer internals, floppy and hard disk drives, and measures a whopping 19x11x4 inches plus the detachable keyboard. If you add a cartridge such as the Spectre GCR, the machine seems to take on immense proportions if your work area is on the smallish side. The so called "wedding cake" style TT case has been the subject of much debate; you either like it or you do not. Fortunately, Atari chose to mold the MegaST^{E}'s case in a platinum grey color which many find more appealing than the rather anemic off-white color of the TT.

The "feel" and tactile response of the detachable keyboard is superb. Function keys are now shaped more sensibly so you don't need parallelogram-shaped fingers anymore. Both mouse and joysticks conveniently plug into the sides of the keyboard. Some of the TT's design flaws haunt the MegaST^{E}, however. For example, the coiled keyboard cable plugs into the RIGHT hand side of the keyboard and into the LEFT hand side of the computer, effectively cutting the usable length of the cable in half. A more serious flaw is the proximity of the keyboard cable jack to the cartridge port (figure 1). With the cable plugged in, a large cartridge (such as the Spectre GCR) may not be fully inserted. It still works, mind you, but does not leave the user with much peace of mind. Inserting or removing a cartridge from the port while the computer is powered on is potentially hazardous to cartridge, computer, and your wallet.

Next to the cartridge port on the left side of the computer, we

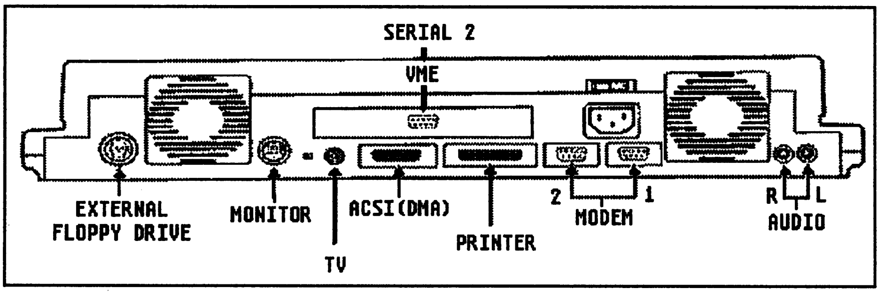
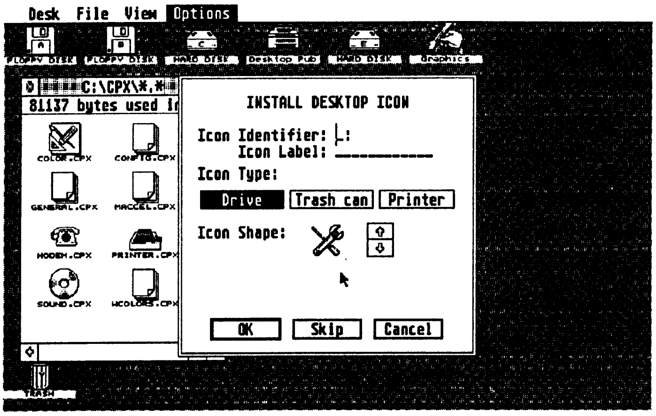


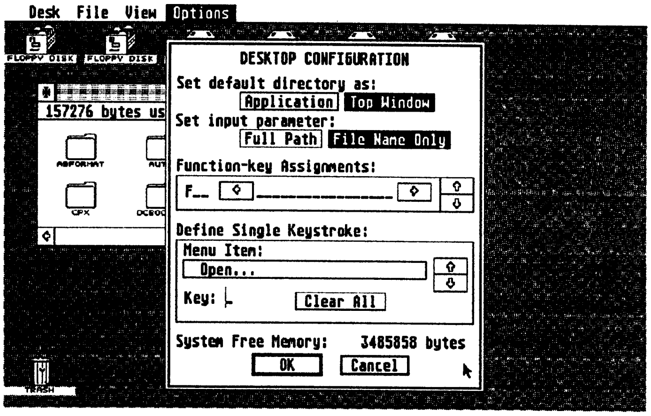
Figure 2: Mega STE Back Panel Ports



INSTALL DESKTOP ICON

Icon Identifier: _:
Icon Label: ________
Icon Type: Drive | Trash can | Printer
Icon Shape:

Figure 3. A variety of icons can now be installed on the desktop.



DESKTOP CONFIGURATION

Set default directory as: Application | Top Window
Set input parameter: Full Path | File Name Only
Function-key Assignments:
F__
Define Single Keystroke:
Menu Item:
Open...
Key: _
System Free Memory: 3485858 bytes

Figure 4: New desktop configuration menu lets you define function keys and assign keystrokes to menu items.

find the traditional MIDI IN and OUT ports (still no MIDI THRU), power reset switch and a LAN (Local Area Network) port. The latter is a welcome addition which will ostensibly allow easy connection and communication between multiple computers and other devices via an AppleTalk-like network. Software supporting the LAN protocol is sure to come so stay tuned.

Looking at the rear of the machine (figure 2), we find a slew of changes! On the left is the standard external floppy drive port, then the monitor port (use your existing ST color and monochrome monitors) and even an RF modulator port for connection to a television. Next we find the ACSI (Atari Computer Systems Interface; aka DMA) port for connection of external hard disks and the like. Then there is the standard parallel printer port followed by two modem/serial ports. The modem ports are of the DB9 variety though, so it's time to round up a new modem cable (IBM AT modem cables work fine). The much-touted VME slot sets above the ACSI port and is currently occupied by still another DB9 serial port. And on the far right is a single internal fan (at last!) and two RCA phono jacks for stereo output.

Rounding out the package is a standard two-button Atari mouse, power cable, TV cable and a compact but very nicely written and illustrated owner's manual of 170 pages or so. A standard, 720K DSDD floppy drive is incorporated into the front of the machine. Sorry, no 1.4Mb DSHD "superfloppy" drives as yet.

Up and Running with TOS 2.5

At last we are ready to power up the beast. So plug in the power cable, monitor cable, keyboard and mouse and flick on the power switch. Oh-oh. Nothing happens. But wait five seconds and the hard drive reassuringly begins to spin up and soon initialize itself. Strangely enough, at this time you need to press any keyboard key to allow the computer to continue to autoboot from the hard disk. If you don't, the computer will wait for a minute and a half before eventually taking over and completing the boot process on its own. The hard disk comes formatted in four 11.5Mb partitions with boot software already installed. All users will greatly appreciate this "plug and play" philosophy. To boot from a floppy instead of the hard drive, just press the [ALT] key once the machine powers up.

When the desktop appears, you notice the icons look a little different. After some experimentation or browsing through the manual (heaven forbid), you discover new icons can be selected via a menu item from a generous library of predesigned icons (figure 3). You can also install any application on the desktop as well as a handy printer icon.

Under the Options menu (figure 4), you find you can set default directories, input parameters, and even function key assignments for any application (all right!). Not only that, but each drop down menu option can be assigned a keystroke of your choice. For example, you could assign the [S] key to activate the Show Information command from the File menu and the [B] key to toggle the Blitter graphics chip on and off. If all this sounds strangely familiar, it's evidence that Atari has kept an eye on the 3rd party developers of ST utility software as many of these features are reminiscent of *NeoDesk*, *MaxiFile*, *HotWire* and others.

Other new menu commands include a handy file Search command and a Bottom to Top command which reverse orders any existing windows on the desktop. You can also choose Set File Mask to select the file type to be displayed in the active window. The View menu still forces all windows to be shown as either icons or text but you may now have up to seven windows open at once. Files set to read-only status have a little triangle next to them and you may select all files in the current directory with a menu command. Applications can be set to autoboot status and document types within a specified directory can be linked to a given application. You may keep multiple NEWDESK.INF (equivalent to the old DESKTOP.INF) files on hand and change them on the fly without rebooting via the new Read .Inf menu command. Trust me, there are a *lot* of positive changes thanks to the new TOS 2.5!

Next, explore the new Control Panel Accessory which has been lifted from the TT. The new control panel is called *entensible* because it supports up to 99 smaller programs known as CPXs or Control Panel Extensions (figure 5). Unlike desk accessories (still limited to a maximum of six), CPXs do not have to be memory resident but may be loaded from disk only when called. The MegaST^{E} comes with several CPXs factory installed which manage window colors, CPX configuration, CPU speed, stereo sound, mouse acceleration, modem and printer setup, etc. And at long last, the MegaST^{E} incorporates a battery backed up internal clock--set the time and date once with the Control Panel Accessory and then forget it!

16MHz Spells F-A-S-T Relief

You may be wondering how the new 16MHz 68000 works in practice. Is it really appreciably faster? Is it crashworthy? Is it worth the extra bucks? The answer, dear reader, is yes, Yes, and YES. From my, thus far, limited time with the machine, I can definitely report that the cached 16MHz CPU does a fine job of speeding up most applications and with a very low bomb rate. With the combination of 16MHz with cache on, Blitter chip, and a software accelerator such as *QuickST* or *TurboST*, this puppy just flies! Windows seem to SNAP open and scrolling text and moving blocks of data around is visibly faster than in 8MHz mode. It just plain works.

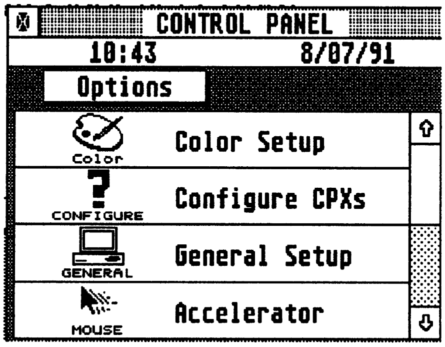


Figure 4. The new Control Panel supports up to 99 CPXs.

Table 1. Speed tests on the Mega STE.

Test	8MHz	16MHz	16MHz w/cache	16MHz w/cache QuickST 2.2
CPU memory	100	100	165	165
CPU register	100	100	204	204
CPU divide	100	183	204	204
CPU shifts	100	180	208	208
DMA 64K Read	5680	5853	5853	5680
GEMDOS files	1185	1185	1552	1204
TOS Text	102	108	174	601
TOS String	96	100	158	3208
TOS Screen	135	136	153	189
GEM Dialog	133	138	215	645

Using version 1.0 of James Allen's FaST Benchmarks utility, we get the following results:

Test	8MHz	16MHz	16MHz w/cache
MC68000 code	100.65	103.71	176.24
Software Float	100.67	115.55	194.14

But knowing you won't take my word for it, I have presented in table 1 some benchmark figures made with version 2.1 of Darek Mihocka's *Quick Index* utility. All the tests were based on TOS 1.0 as the reference point (100%) in medium resolution color.

Numbers don't lie, but they can be misleading. Often, a better performance indicator can be made via the timing of real-world tasks. For example, rotating an identical, large graphic clip under Migraph's *Touch-Up* software required about 8 seconds on a 32MHz TT, 10 seconds on a 16MHz MegaST^{E}, and over 20 seconds on an 8MHz STacy portable. Since the MegaST^{E} has a Blitter graphics accelerator and the TT does not, some tests may yield surprising results. For example, using a version of the famous *BOINK!* bouncing ball program, the MegaST^{E} with Blitter chip on was clearly *faster* than the TT. In all fairness, however, once TT fast-RAM is installed and software is specifically written to take advantage of this RAM and the 68030's cache, it will surely blow the doors off the MegaST^{E}. But if you intend to run strictly ST software, the MegaST^{E} may well be the clear winner from a cost vs. performance standpoint.

For you Spectre GCR users out there, version 3.0 works great on the MegaST^{E} and at 16MHz returns a respectable *Speedometer* (a popular Mac benchmark utility) rating of 2.15 times faster than a Mac Plus. At 8MHz the rating drops to 1.50.

Software Compatibility

Basically, the MegaST^{E} is an ST^{E} with several new goodies added in. If your software works on a 1040ST^{E}, it will most likely work on the MegaST^{E} as well. From my limited experience thus far, table 2 shows a partial list of programs I have tested on the MegaST^{E}.

Hardware Additions

Modems: the use of DB9 modem ports causes some frustration to existing ST users due to the need for a new cable.

Printers: connecting a parallel printer is as easy as it ever was and now we have serial ports too. Atari has thoughtfully included a screen-dump driver for use with the Atari laser printer.

External Hard Disks: connecting your existing SCSI hard disk will likely be as easy as plugging it into the ACSI port and turning it on. ICD host adaptors work without conflict when connected to the MegaST^{E}.

Monitors: you are currently limited to the ST color and monochrome monitors unless you purchase an adapter and run a multisync monitor. This may be a good choice if you plan on eventually purchasing a VME graphics card.

External Stereo Speakers: with the stereo RCA phono jacks, running your computer's sound output through your stereo system or a pair of self-powered bookshelf speakers is simplicity itself.

IBM Emulators: the square 68000 chip makes use of *pc ditto II* all but impossible. *Supercharger* should work fine as does *pc ditto I.*

Macintosh Emulators: other than the interference between keyboard cable and cartridge, expect Mac emulators like the GCR to work just fine (only faster).

Accelerators: Fast Technology's new Turbo20 accelerator will likely be made available for the MegaST^{E} but you will have to judge if moderate gains in speed are worth the upgrade cost. It is still unknown if Gadget's screaming SST 68030 accelerator will be made available for the MegaST^{E}.

Local Area Network: yet to be seen but should be great.

Wrap It Up

By and large, Atari's new MegaST^{E} is an impressive machine. It's fast, highly compatible, and the new TOS and extensible control panel enhance an already excellent desktop environment. We finally have a great keyboard and the built-in hard disk, VME port, and simple memory expansion enhance its usability as well as ultimate survivability.

Unfortunately, the ST^{E}'s graphics capabilities are still far behind the times. It's rumored that both European and Canadian developers are working on VME graphics cards for this machine so perhaps in time we'll at least have VGA equivalent graphics with a 640x480 pixel display of 256 simultaneous colors. Then we can start badgering Atari for affordable 24/32-bit color displays of 16.8 million colors!

Compatibility Tests

Programs That Sometimes WORK

GFA Basic 3.5 Int.--Works with some conflict moving from immediate to program mode.

GFA Basic 3.5 Comp.--Works but must remove Extensible Control Panel ACC.

Programs that DO NOT WORK

Populous

Twister2

Programs that WORK

Aladdin

Degas Elite

Dungeon Master

Spectre 3.0

WordWriter ST 2.0

ARC and LHARC

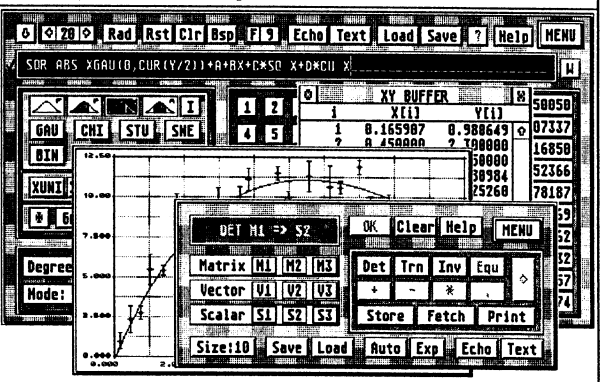
DC Format 3

pc ditto v.3

Test Drive I

With the current price war surrounding the 1040ST^{E}, the MegaST^{E} linemay seem to be overpriced at first. However, when one considers what the package includes and what it would cost to "cobble" together a system to approximate the MegaST^{E}'s features, it becomes more attractive. In fact, one of the nicest features about the MegaST^{E} is how seamlessly everything is integrated. After dealing with bits and pieces strapped onto and into my old 1040 like so many pieces of baling wire and bandaids, it's really nice to have a clean setup again. Like the man says, "You want it? It's in there."

So go take a good long look at the new MegaST^{E}. Even better, try to arrange a test drive. You are sure to come away impressed and confident in the knowledge that Atari still has what it takes to make a great computer.



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Owners of older versions who do not wish to upgrade to v.2.0, may update their copies to v.1.4 (no differential equations).

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El Cal's little brother: a scientific (and we mean it!) calculator accessory with the most powerful function set on the market. **$15.**

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More than 9000 brightest stars. Planets, Sun and Moon. Various projections, reference frames and magnifications. Mapping, listing and database manipulation. For amateur astronomers and for those who just like playing with the Universe. This new version adds the **comets** and more than 300 extragalactic objects. **$43.**

Big Sky

An additional database of more than 40000 stars and deep sky objects. Requires Star Base 1.1 or higher. Many operations possible with 1 MByte of memory, but 2MB are recommended. **$22.**

Compatibility: All programs run on any Atari ST, Mega or STe, color or monochrome. Moniterm and TOS 1.6 OK. All except El Cal 1.4 need 1 MByte or more of RAM. **Prices** as shown above include shipping, and will definitely go up sooner or later. When ordering two products, deduct $6, and $4 for each next.Outside continental US add $5 per order. Utah residents please add sales tax. **Updates:** first one free, then $5 each. **Upgrades** to El Cal 2.0: $20 (foreign $22).

To order, send a check (in $US, drawn on a US bank) or money order to
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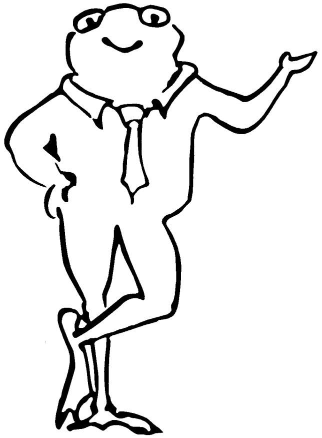

MONITORS & FRIENDS

Everybody needs a monitor. Sometimes they even need two. When they do, **TOADSWITCH** and **TOADSWITCH-M** come to the rescue! Order your **TOADSWITCH** *toaday!*

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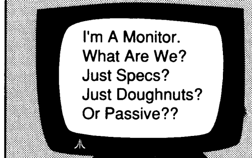
Atari SC1435 14" Stereo Color	$329
Magnavox 1CM135 14" Stereo Color	$319
Acer 7015 ST/TT Color/Mono Multisync	$409
Atari PTC1426 Color TT Monitor	$479
Atari TTM195 19" Monochrome	$959
TOADSWITCH ST Monitor Switcher	**$39**
TOADSWITCH-M ST Multisync Controller	**$59**

A Monitor Switchbox and Multisync Controller?

The **TOADSWITCH** and **TOADSWITCH-M** are handy switches which will switch between monochrome and color on the ST. The **TOADSWITCH** is for two standard ST monitors. The **TOADSWITCH-M** is designed for switching between color and monochrome on a single multisync monitor, but will switch two ST monitors also.


I'm A Monitor.
What Are We?
Just Specs?
Just Doughnuts?
Or Passive??

HANDY TIP

When looking for a multisync monitor for your ST, make sure the low end horizontal sync is no more than 15.75 KHz. Color resolutions will not work otherwise.

SPECTRE GCR

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TURNS YOUR ST / TT030 INTO A MAC!

(Bathroom Graffiti - Ponderous)
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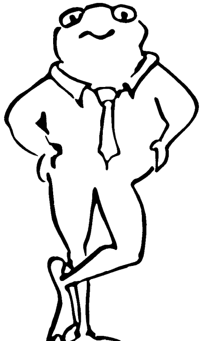

On Our Mailing List?

In April, we sent out sixteen thousand postcards. The response was terrific! If you want to be on the list to receive our next catalog (which will include eight bits, STs, TTs, and more) please be sure to call us! If you got a postcard, you'll probably get a catalog - but if the code on your card ends with a number less than 8806, you may not! Be sure to call to be certain!

It STopped Breathing?

If your ST has just stopped breathing, give it two puffs followed by five chest compressions and then send it to us. Some days we just wait around for ST's to kick the bucket - just so we can go and fix 'em. Don't hate us because we're morbid, though. Send us your ST before real brain damage takes place. Include a note listing symptoms of death, and try to call us before you send it.

We Buy Eight Bits!!!

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Panasonic KXP1124	$289
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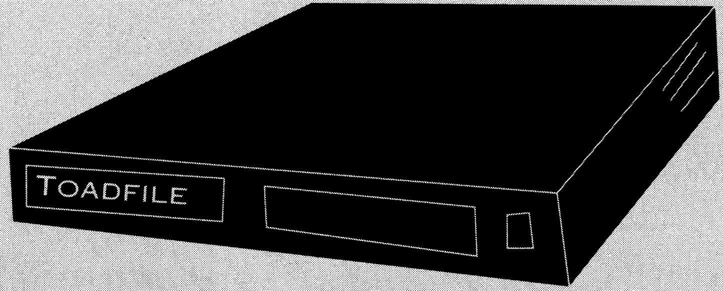

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Super Video For the 800 XL

CN SPECIAL REPORT

Revision 2

Part 1

by Ben Poehland

[This updated revision to Ben Poehland's original article on sprucing up the video signal of the Atari 800XL (published in *ComputerSmyth* magazine in February 1987) has been significantly enhanced. In this version, the entire conversion is accomplished by adding components rather than replacing components, and it has been extended to include improvements in the color signal as well as the monochrome signal. Because of its length, we are dividing the article into two parts. Part 1 covers the 800XL video signal, the problem with Atari's implementation, and how it can be enhanced. Part 2 covers the color signal and the actual step-by-step instructions for doing the modification. -JW]

Since this hardware hack involves opening up your computer, I have to give all the standard notices about voiding your warranty (like, there is still an XL out there with a warranty left on it?) and if you botch it, neither the Alchemist nor *Current Notes* will be responsible, mumble, mumble, mumble, etc. Now I'll put my Alchemist hat back on, and let's get down to the Neat Stuff. I'll start with a little history.

At the beginning of 1984, when I acquired my first 800XL, I figured I would use it with a TV (as I had my Sinclair before it croaked). After a week of 40-column *AtariWriter* ROMcart wordprocessing on the TV, I went nuts. The display was blurry, grainy, and unstable: zigzag herringbone patterns modulated the screen to the accompaniment of an annoying background buzz emanating from the TV speaker. Surely, there was something better!

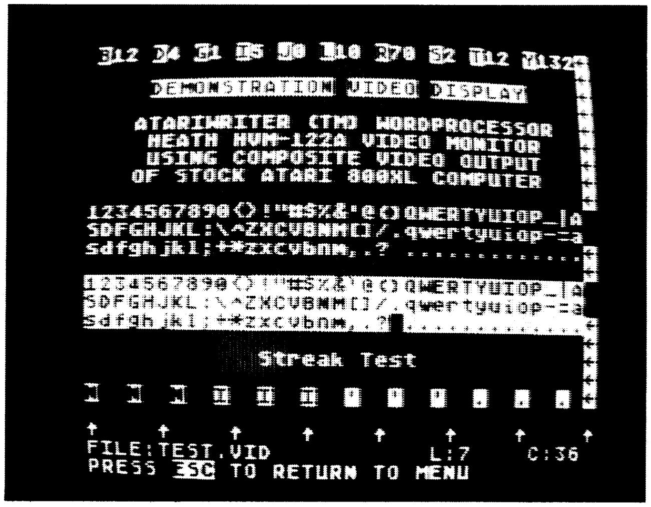
I read an interesting article by John Soluk in the April 1983 *Radio-Electronics* describing sources of interferences in the computer-TV video interface. I ordered a kit that enabled you to bypass all the signal-contaminating influences of the television's tuner by injecting the computer video signal directly into the TV's first video amp stage. This worked reasonably well and brought some stability to the TV display, but getting it to work was very labor intensive and ended up costing almost as much as a good monochrome monitor. In those days I didn't understand the relationship between a video display's video bandwidth response versus screen resolution. After an enormous amount of effort, what I ended up with was essentially a poor-quality video monitor with a 4.5 MHz video bandwidth (all that's required for black and white TV). But any numbskull knows you need a good 12 MHz response for a crisp, clean, well-resolved analog computer video display. We Alchemists are slow learners; I used the TV-converted-to-not-very-good-monitor arrangement for maybe a year, all the while hankering for something still better.

It came in the form of the Heathkit HVM-122A monitor, which was also a popular seller in its commercial factory-assembled form, the Zenith ZVM-122/123 series. Even by standards today, this was a very decent monitor (they still show up occasionally at fests or electronic swapmeets) with an 18 MHz video bandwidth, low-glare 12" screen, and a choice of amber or green phosphors. I purchased the Heathkit unit (it was cheaper), assembled it, and published a favorable review of it in the April 1986 *ComputerSmyth.*

My first inkling that something was amiss with the Atari 800XL came when I tried to adjust the focus on the Heath monitor using a signal supplied by the XL. No matter how much I fiddled, I couldn't see any difference in the focus adjustment; the whole screen was blurry. So I brought my XL and the monitor to my local Heathkit store (now turned into an Apple distributor) to show them the problem. The store tech connected a fancy Heath computer to the monitor, saw it was working fine, made the focus adjustment easily, then reconnected my XL. It was the same smeary display. The store manager now joined in. "What did you say your computer is?" "Atari 800XL." The manager and store tech looked at each other and snickered. Mortified, I beat a sullen retreat.

Atari's XL Video Scandal

Take a good look at the screen photos in Figure 1A and 1B. This is what my Heathkit store tech was snickering at, with good reason. On the stock Atari 800XL, you got a lousy display whether you used the com-



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B12 D4 G1 I5 J0 L10 R70 S2 T12 Y132←
DEMONSTRATION VIDEO DISPLAY
ATARIWRITER (TM) WORDPROCESSOR
HEATH HVM-122A VIDEO MONITOR
USING COMPOSITE VIDEO OUTPUT
OF STOCK ATARI 800XL COMPUTER
1234567890<>!"#$%&'@()QWERTYUIOP_|A
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Streak Test
N  N  N  I  I  I  ▮  ▮  ▮  ▮  ▮  ▮←
↑     ↑     ↑     ↑     ↑     ↑     ↑     ↑
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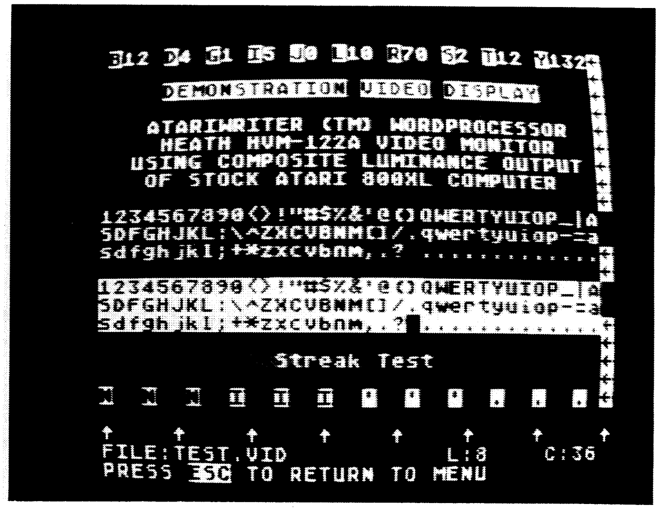
```

Figure 1A: Composite video output of stock 800XL. Worst case grain, blur, and smear.



```
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DEMONSTRATION VIDEO DISPLAY
ATARIWRITER (TM) WORDPROCESSOR
HEATH HVM-122A VIDEO MONITOR
USING COMPOSITE LUMINANCE OUTPUT
OF STOCK ATARI 800XL COMPUTER
1234567890<>!"#$%&'@()QWERTYUIOP_|A
SDFGHJKL:\^ZXCVBNM[]/.qwertyuiop-=a
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sdfghjkl;+*zxcvbnm,.?▮............←
Streak Test
N  N  N  I  I  I  ▮  ▮  ▮  ▮  ▮  ▮←
↑     ↑     ↑     ↑     ↑     ↑     ↑     ↑
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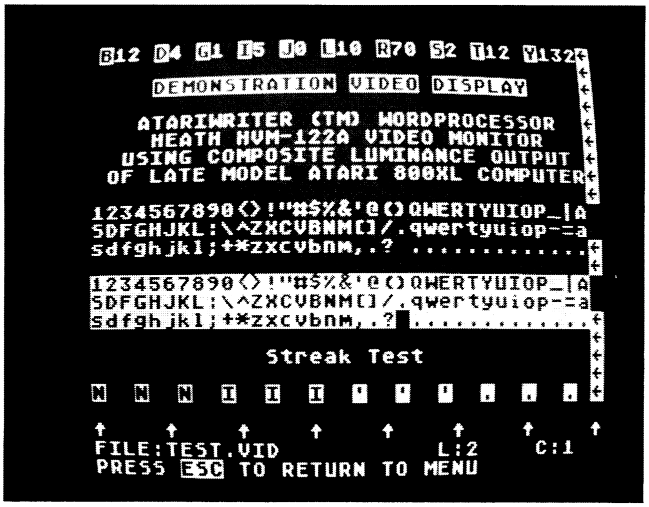
Figure 1B: Monochrome display of stock 800XL using luminance output, grainy background reduced but display is still blurry (trailing edges of characters are smeared.



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B12 D4 G1 I5 J0 L10 R70 S2 T12 Y132←
DEMONSTRATION VIDEO DISPLAY
ATARIWRITER (TM) WORDPROCESSOR
HEATH HVM-122A VIDEO MONITOR
USING COMPOSITE LUMINANCE OUTPUT
OF LATE MODEL ATARI 800XL COMPUTER←
1234567890<>!"#$%&'@()QWERTYUIOP_|A
SDFGHJKL:\^ZXCVBNM[]/.qwertyuiop-=a
sdfghjkl;+*zxcvbnm,.? ............←
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SDFGHJKL:\^ZXCVBNM[]/.qwertyuiop-=a
sdfghjkl;+*zxcvbnm,.?▮............←
Streak Test
N  N  N  I  I  I  ▮  ▮  ▮  ▮  ▮  ▮←
↑     ↑     ↑     ↑     ↑     ↑     ↑     ↑
FILE:TEST.VID            L:2     C:1
PRESS ESC TO RETURN TO MENU
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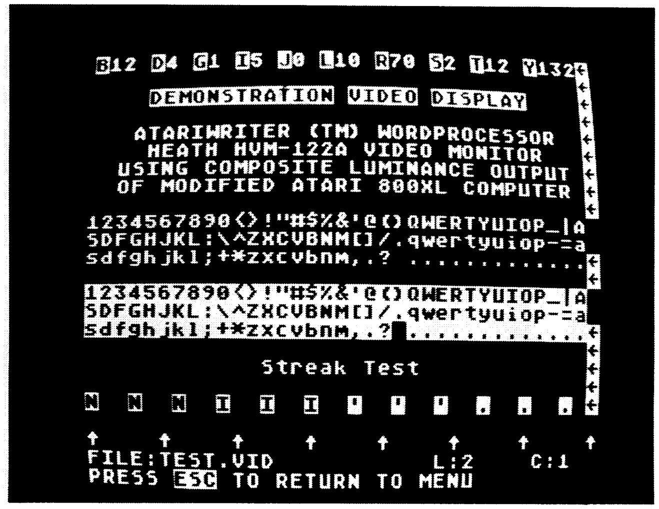
Figure 1C: Monochrome output of late model (Taiwan) stock 800XL. Video sharpness much improved, but background is still grainy. The XE machines also look like this.



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B12 D4 G1 I5 J0 L10 R70 S2 T12 Y132←
DEMONSTRATION VIDEO DISPLAY
ATARIWRITER (TM) WORDPROCESSOR
HEATH HVM-122A VIDEO MONITOR
USING COMPOSITE LUMINANCE OUTPUT
OF MODIFIED ATARI 800XL COMPUTER
1234567890<>!"#$%&'@()QWERTYUIOP_|A
SDFGHJKL:\^ZXCVBNM[]/.qwertyuiop-=a
sdfghjkl;+*zxcvbnm,.? ............←
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sdfghjkl;+*zxcvbnm,.?▮............←
Streak Test
N  N  N  I  I  I  ▮  ▮  ▮  ▮  ▮  ▮←
↑     ↑     ↑     ↑     ↑     ↑     ↑     ↑
FILE:TEST.VID            L:2     C:1
PRESS ESC TO RETURN TO MENU
```

Figure 1D: Super Video using luminance output of 800XL. No grain, no blur, no smear!

posite video (color) output or the composite monochrome (Luminance) output. Smeary, blurry, fuzzy, grainy. I used to see other people with 800XL's sitting in front of screens that made me go crosseyed, with no apparent distress. It didn't seem to matter how lousy the display was, people used it anyway.

Then a strange thing happened. Atari moved 800XL production from Hong Kong to Taiwan, and later production (Taiwan) models exhibited marked improvement in video output (Figure 1C). By that time I had acquired three XL machines, all with smeary video. What was going on?

I knew it wasn't my eyes or my monitor; it was the computer. Atari knew it, too. The only real way to solve the mystery was to see the hardware docs for the XL. Five years ago this information was only just beginning to surface in the open market. I sent off direct to Atari for the infamous Tech Notes. That transaction went sour, resulting in my coming within a hairsbreadth of filing a lawsuit against Atari as the result of an unprintable obscenity one of their employees wrote on my invoice (this was during the Warner-Tramiel takeover when morale at Atari was lower than a snakes's belly in a wheel rut). I was on the brink of trashing my entire computer when Atari lubricated my sore spot with a few greenbacks. My ruffles were soothed, but in the interim Atari had done a good job of deflecting me from my real purpose.

I did battle with two more disreputable mailorder firms (one of whom actually destroyed my check) before finally laying hands on the coveted 800XL schematics. Hardware docs in hand, I dissected my 800XL like a doctor performing surgery from a manual. I measured voltages, checked waveforms with an oscilloscope, made notes, did lots of calculations, and rubbed my chin so hard no whiskers grew for a month. By the time I completed this 8-bit alchemical investigation, I knew what was wrong.

To state it plainly, Atari butchered the video output on the 800XL. From the viewpoint of both design and execution, it was a botched job from the beginning. The monochrome video signal was overburdened with RF-suppression, the chrominance signal was never brought out to the rear jack, and leakage of color clocking signals into the mono signal made a mess of everything. The worst blunder was a gross mismatch of the mono signal's output impedance to the 75-ohm video line: it was off by 400%! This was the problem Atari fixed in late production models from Taiwan, resulting in the display typical of Figure 1C. But even this fix was sloppy: it reduced the impedance error to about 25% (!) and removed the RF suppression, but didn't address the other flaws in the XL video circuit.

The butcher job on the 800XL video circuit has to be Atari Corporation's best-kept scandal. The original design, per Atari's schematics, is flawed. The flaws were amplified by a stupid mistake made by someone in Atari's Hong Kong factory, resulting in thousands of XL's that were manufactured with the wrong value impedance resistor installed, which didn't even match the value in Atari's own schematics! Atari had to be well aware of this, but someone shipped the defective units anyway. Look at the bottom of your 800XL: if it is of Hong Kong manufacture, and if the circuit board inside is REV C or REV A2, the smeary displays of Figures 1A and 1B will be a familiar sight to you. There might be other 800XL variants floating around out there with defective video sections; I haven't seen everything.

When I first began my investigation, I didn't know exactly where to look, so I looked everywhere. I had already documented a number of minor flaws before I stumbled upon the biggie, the monochrome impedance mismatch. Atari only fixed the worst problems, leaving a host of lesser ones to inhabit their last production runs of XL computers. When I began experimenting with fixes for the XL, I decided to make a thorough job of it, curing every problem I could find--big or small. As a result, the video output of a defective Hong Kong 800XL with my Super Video Rev 2 mod is at least as good as that of an 800 or an XE, maybe better. The final proof of this is visible in Figure 1D: just plain sharp, clear video, where focus adjustments made to the monitor can now be readily observed.

Video on Other 8-Bits

Over the past several years I've acquired hardware docs on just about every computer and peripheral Atari ever made. One of the first things I looked at with each new set of schematics was the video section. Video in the 400/800 and 1200XL was handled rather differently than it was in the 800XL, 600XL, and XE machines. Unfortunately, my hands-on experience is limited to the 800XL. However, I'll try to make some generalizations about the other computers based largely on examination of their schematics.

Video in the 400 is primitive: a single transistor handles all the signal summing and amplification and sends composite video to the RF modulator. The 400 works only with a TV set. I've seen a few video demos on the 800 that looked OK to me, and I never heard anyone complain about video quality on the 800. Video amps in the 800 vaguely resemble those in the 600XL/800XL but employ capacitive coupling and differ in the way the output signals are summed. The 800 offered a full range of video outputs: RF modulation to a TV set, composite video, luminance, and chrominance.

I don't think I've ever even seen a 1200XL in use, so I can't offer an opinion as to its video performance. Again, I never heard anyone complain about it, other than like the rest of the XL series it didn't have a separate chrominance output like the 800 did. Video summing/amplification in the 1200XL is unlike any of Atari's other computers. It's a complicated affair employing seven transistors; I still haven't deciphered it entirely. The lousy 10th-generation xerox diagrams I have don't help.

I've never seen a 600XL in use, either, and Atari's schematics for the 600XL are atrocious. One gets the impression the 600XL diagrams were hurriedly done as an afterthought, when the 800XL machines were already well along in production. The diagrams were published minus the arrow on all the transistor symbols, making it tricky to distinguish between collector and emitter (in standard schematic notation a transistor symbol always has an arrow on the emitter lead). Even worse, the factory error that resulted in thousands of defective 800XL's was incorporated into the docs for the 600XL! The design of the video output circuit in the 600XL is identical to the 800XL. Therefore, the Super Video mod I'll describe for the 800XL should produce equally dramatic improvements on a 600XL. However, you 600XL owners will be on your own for locating the relevant parts and making the recommended changes.

The mono portion of video amplification in the 130XE is essentially identical to late-model XL's. Color output and signal summing is greatly simplified, since much of that is handled by the XE's RF modulator. The XE series differs from all the earlier machines by having composite video generated by the RF modulator instead of on-board components. Most XE owners appear satisfied with the video performance of their machines, but since the XE's mono circuit bears remnants of the design flaws that dogged even late-production 800XL's, The Alchemist strongly suspects there is room for improvement in the XE video display.

I will present the nuts and bolts of doing the modification in Part 2 next month. In the remainder of this article, I would like to define a few terms and review the basics of 8-bit video generation and interfacing. I'll avoid delving into the inner workings of video monitors--scanning, synchronization, etc.--since Dave Small has already beat that subject to death. I'll refer you to Dave Small's columns earlier this year for the gut-level basics of how video works. ["Part 1, Video Scanning" (*CN*, January/February 1991, p. 18) and "Part 2, The Role of Video Memory," (*CN*, March, 1991, p. 18.)

Luma-Chroma Stuff

Figure 2 shows the arrangements commonly seen for connecting computers to various types of video displays. Figure 2A is the point of departure between the Atari 8-bits and most of the rest of the world: sometimes called the RGBI interface, this is the digital interface you'll find on IBM machines (and other 8088 clones) that populated the market in the mid-80's. Digital displays are generally superior to the analog output of an Atari 8-bit. There have been a number of variations on the digital video interface. In the diagram shown, R,G, and B are the three color signals (Red, Green, and Blue) while I (Intensity, sometimes designated Y) carries video brightness and sync signals. But in other arrangements, the RGB signals incorporate both color and brightness, while I carries only a composite sync (horizontal and vertical synchronization) signal. The I signal may not always be present separately, in which case it is usually found mixed with G. Some TTL color monitors--such as the Princeton SR-12--required the components of the basic video signal (vertical sync, horizontal sync, and brightness--sometimes represented by the letter Z) to be broken out individually in addition to the three separate color signals, so you would have inputs for R,G,B,H,V,Z, audio and ground. The many standards that evolved for digital video--CGA, EGA, VGA, etc., is a tangled story best told by someone with more IBM experience than I.

In the digital RGBI interface, the signals are usually at TTL level--+5 volts, which is why digital monitors are often called TTL monitors. The connector is typically a DB-9 type with lots of wires to carry all those separate signals. So, can you use an IBM-type digital monitor with your 8-bit Atari? At the moment, no (though I've heard of people doing it from an XEP-80). I do have a monochrome IBM 5151 monitor in the closet, and after some initial research I'm 90% sure the Atari's analog output can be converted to TTL video (mono, anyway). The Alchemist already has circuit designs and chips in hand. Finding the time to do the breadboard experiments and lay out a card is another matter altogether.

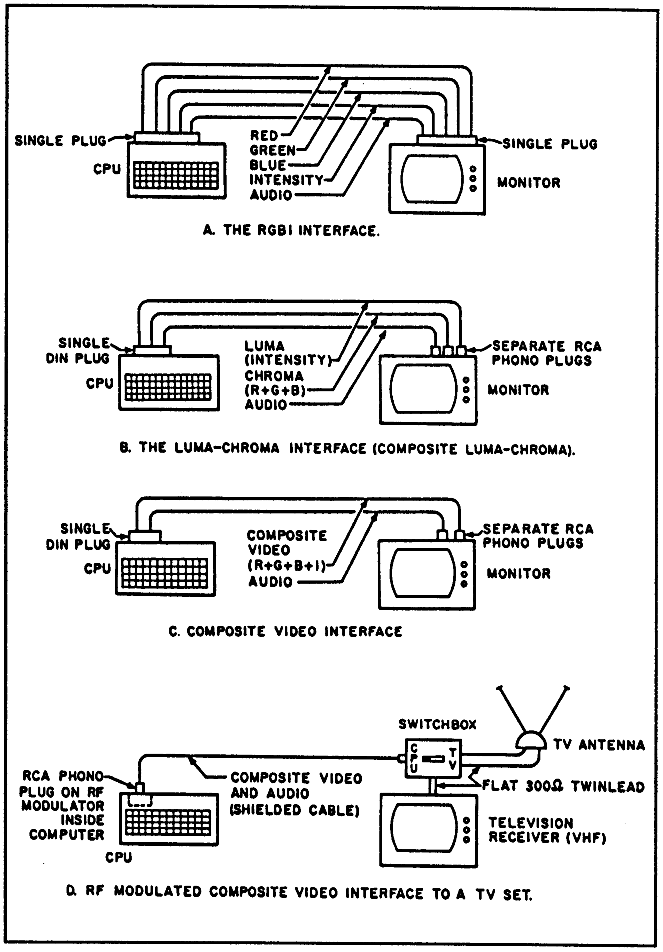

SINGLE PLUG
CPU
RED
GREEN
BLUE
INTENSITY
AUDIO
SINGLE PLUG
MONITOR
A. THE RGBI INTERFACE.
SINGLE DIN PLUG
CPU
LUMA (INTENSITY)
CHROMA (R+G+B)
AUDIO
SEPARATE RCA PHONO PLUGS
MONITOR
B. THE LUMA-CHROMA INTERFACE (COMPOSITE LUMA-CHROMA).
SINGLE DIN PLUG
CPU
COMPOSITE VIDEO (R+G+B+I)
AUDIO
SEPARATE RCA PHONO PLUGS
MONITOR
C. COMPOSITE VIDEO INTERFACE
SWITCHBOX
C P U
T V
TV ANTENNA
RCA PHONO PLUG ON RF MODULATOR INSIDE COMPUTER
COMPOSITE VIDEO AND AUDIO (SHIELDED CABLE)
FLAT 300Ω TWINLEAD
TELEVISION RECEIVER (VHF)
CPU
D. RF MODULATED COMPOSITE VIDEO INTERFACE TO A TV SET.

Figure 2: Computer video interface connections: (a) the digital RGBI interface, all signals at TTL level. The intensity level may actually be separate intensity, horizontal, and vertical signals; (b) the luma-chroma interface (composite luma-chroma). (c) composite video interface. (d) RF modulated composite video interface to a TV set.

The Alchemist's hands-down favorite for 8-bit video interfacing is shown in Figure 2B, the Luma-Chroma connection. In my opinion, this video interface provides the ideal tradeoff between cost and screen resolution for 8-bit computers. It's an analog connection, with signal levels of 1 volt peak-to-peak as specified by the National Television Systems Committee (NTSC). There are three basic connections: Chrominance, Luminance, and Audio. Chrominance is a term used to describe what is also called "composite color"; the Chroma signal contains the RGB signals encoded in a form analog color monitors require for proper control of the color guns. The Luminance signal is simply the NTSC baseband monochrome video signal,consisting of the usual video brightness, horizontal, and vertical synchronizing signals all mixed into one composite signal. If you encounter the term "composite monochrome," it's the same as Luminance.

The cable for a Luma-Chroma connection is a 5-pin DIN type that splits into four separate shielded RCA phono plugs at the monitor end. (The construction of this cable may have given rise to the term "split video" you hear people use in reference to the Luma-Chroma interface.) These cables are getting hard to find in walk-in computer stores, but many Atari and Commodore dealers still stock them. I like the Luma-Chroma interface because it offers the highest quality 8-bit analog signal. It also offers maximum flexibility: you can get improved resolution on mono monitors using just the Luma connection, or for the best combination of sharpness and color you can connect both the Luma and Chroma plugs to an appropriate color monitor. The main drawback to the Luma-Chroma interface is finding a color monitor that accepts this type of input. I'll address that issue later in this article.

The most frequently encountered 8-bit video interface is shown in Figure 2C, the infamous composite video connection. It's the simplest way to connect your 8-bit to a video monitor, but it isn't the best. There are only two signals: audio and composite video. The composite video signal contains the Luminance and Chrominance signals all rolled into one. Used with a mono monitor, the presence of the color signal component creates the distracting, grainy background visible in Figures 1A and 1C. The few analog NTSC color monitors left on the mainstream market (models by Philips/NAP/Magnavox come to mind) only accept composite video, so composite video might be your only choice for use with today's color monitors. Composite color monitors have to do a lot of decoding to retrieve all the video information, a process that invariably degrades the original signal and results in poorer picture quality compared to luma-chroma monitors.

Figure 2D shows the setup for connecting your 8-bit to a TV set, the RF-modulated composite video interface. Ugh! This is how most people start out when they first bring the computer home. I'm amazed at the number of 8-bitters who still use this setup, since it gives you the poorest performance in both video and audio. A single shielded RCA phono cable carries the signal from the jack on the rear of the computer to the little switchbox Atari supplied with all their 8-bit machines. The switchbox attaches to the antenna terminals on the TV set. You tune the TV to channel 2 or 3 (whichever lacks an active station assignment), set the switch on the rear of the computer to match the selected TV channel, and away you go into the Land of Smeary Video. I hate it.

There's a whole bunch of reasons this interface is so poor. Composite video is a complex admixture of signals: audio is mixed with Luminance and Chrominance to obtain the basic signal, which is then mixed (RF-modulated) with the carrier frequency for television channel 2 or 3. This hideous electromagnetic mess is then subjected to the tender mercies of the circuits in the TV's tuner section, with the result that signal leakage from adjacent television channels invariably finds its way into the RF-modulated computer video signal. After that atrocity, the TV decodes the mess with all the attendant degradations to the original signal. You end up with audio contaminated with remnants of video, reproduced as a raucous background buzz on the crummy speaker most TV's have. Tuner leakage with audio contamination shows up in the video display as zigzag herringbone patterns that shift and stabilize, shift and stabilize, until you go crosseyed. Add in the grain from the color signal, and poor resolution due to the 4.5 MHz bandwidth limit in most TV's, it's a miracle the thing works at all. If you can do wordprocessing on such a display without going bonkers, you should be examined for rigor mortis.

Genesis of 8-Bit Video

I want to emphasize the deficiencies of the various video interfaces mentioned above are independent of the problems in the 800XL video circuits. The deficiencies caused by Atari's blunders must be added to the deficiencies inherent in the various video interfaces. This is why I devoted so much effort to improving XL video at the source: once the signal leaves the computer, the interface will only degrade it. The extent of degradation is a function of the type of interface you use, which in turn depends upon the hardware you use for a video display (B&W TV, color TV, analog monochrome monitor, NTSC composite color monitor, or luma-chroma color monitor). I also haven't said much about audio. Audio isn't a problem if you're using a TV or a monitor that has a separate audio input jack. For soundless monitors, I'll refer you to "Cheap Audio" in "The 8-Bit Alchemist," *Current Notes*, May 1991.

The video display on your 8-bit screen is generated by the 800XL's GTIA (Graphics Television Interface Adapter), a 40-pin DIP custom Atari chip. The GTIA generates six video output signals. The first four of these signals are designated Luminance 0,1,2, and 3, from pins 31, 22, 23, and 24 respectively. The fifth signal is composite sync from pin 25, and number six is composite color at pin 21. The four Luminance signals control video brightness and are buffered by the CMOS 4050 chip U20 (Figure 3). The Lum-3 signal is the brightest of the four, with Lum-2,1,0 each being successively only half as intense as its predecessor. This is readily apparent from the values of the four summing resistors R47-R50, each of which is twice the value of its successor. Video brightness is determined by programming these outputs singly or in combination, yielding many different possible brightness levels.

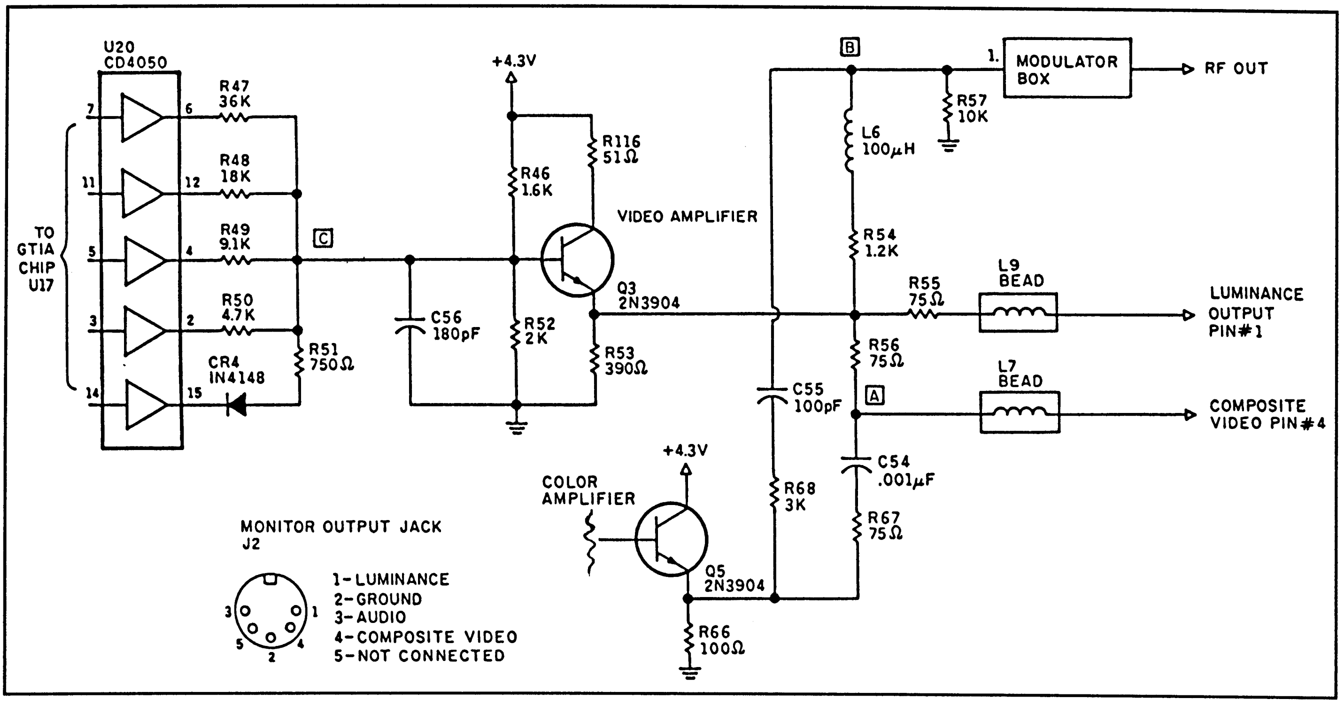


Figure 3: Stock 800XL video output circuit.

The GTIA's composite sync signal consists of the combined horizontal and vertical video synchronization signals. It's also buffered by U20. At point C in Figure 3, all the individually programmed brightness levels are combined with the composite sync signal to produce the 800XL's basic video Luminance signal. The next stage in the circuit is the video amplifier circuit centered around transistor Q3, and here is where trouble begins.

Figure 3 represents the result of my tracing the actual circuit on my REV A2 board, but it differs in several respects from Atari's published schematics (Atari's official 800XL schematics are actually the diagrams for their late-model Taiwan-made machines, not the older Hong Kong units). C56 and R57 were present in my computer but not shown in the diagrams. R57's affect on the video circuit overall is minimal, but the 180pF capacitor C56 is a troublemaker. Presumably placed in the circuit to suppress RF, in fact its main accomplishment is to shave off a goodly amount of the high-frequency content of the Luminance signal. We haven't even amplified it yet, and already the signal is degraded.

Let's follow our Luminance signal to where it enters the base of Q3. In tekkie talk, transistor Q3 is configured as a voltage-divider biased emitter-follower with collector current limiting provided by R116 (R46-R52 comprise the voltage divider). With this type of amplifier, the output impedance is determined by the emitter resistor, R53. In my five 800XLs this resistor had a value of 390 ohms (color code orange-white-brown), so the output impedance of the Luminance output at pin 1 of the monitor jack had to be essentially 390 ohms (R54 and R57 also contribute to the value of the output impedance, but the effect is small so can be ignored). I thought that was mighty peculiar. The value of impedance for an unbalanced video line is an industry standard, 75 ohms.

Video Corrections

Now, a basic rule of electronics is that maximum effective power transfer between two circuits can only occur when their impedances are the same. A circuit whose output impedance is 390 ohms cannot deliver full power to another circuit whose impedance is 75 ohms. Such a mismatch will result in a loss of power and delivery of a weak or unstable signal. That weak, mismatched signal was responsible for the video mess in Figures 1A and 1B.

Someone in Atari's Hong Kong factory programmed the wrong value resistor for R53 when the board stuffing machines were set up. R53 should have been 75 ohms, not 390. So when Atari later changed the value to 100 ohms, the impedance mismatch was much improved but still not fully corrected. Placing a 100-ohm resistor in parallel with R53 lowers the output impedance of the Luminance signal to 79 ohms, pretty close to the target value of 75 ohms and as close as we can come to perfection using Radio Shack parts. But at least Atari removed C56, which improved the basic video signal somewhat. Figure 4 shows C56 removed and the 100 ohm resistor in parallel with R53.

The Q3 circuit has other problems. If you lower the value of R53 to what it should be, the presence of R116 causes Q3 to be "starved" for current. Atari lowered the value of R53 all right, but left R116 alone. In

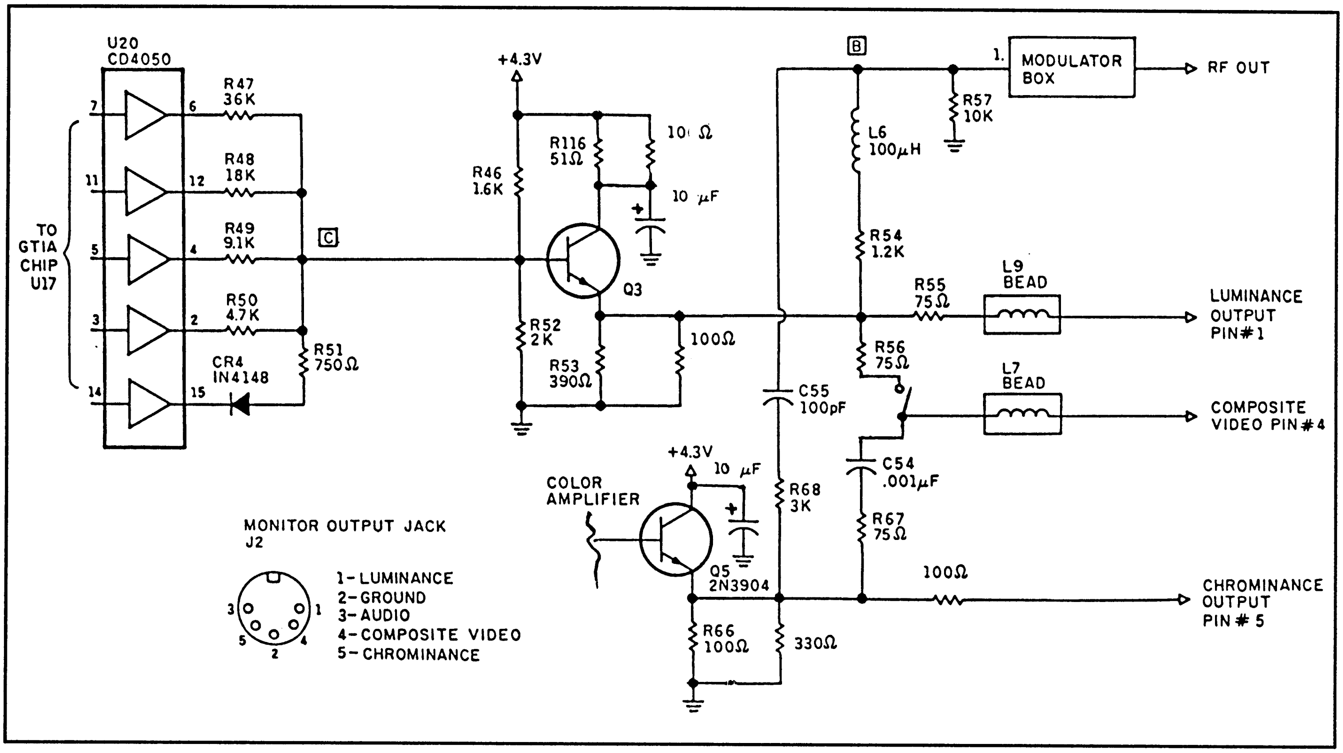


Figure 4: 800XL video output circuit after Super Video modification.

order to optimize the switching action of Q3, both the value of R116 and the impedance of the power supply have to be lowered at the collector of Q3. This is easily accomplished by paralleling a 10-ohm resistor with R116 and adding a 10uF power supply bypass capacitor as shown in Figure 4. In the process, we create a dandy little RC filter that cleans up the supply bus at the collector of Q3 so power supply noise won't get modulated into the output video signal.

Let's go back and pick up the color signal from GTIA pin 21. That signal is fed to the color amplifer circuit consisting of Q2, Q4, and Q5. The final stage of the color output, Q5, suffers to a lesser degree from the same problems afflicting the Luminance output at Q3: the emitter resistor R66 sets the output impedance a little too high, and there is no power supply bypass capacitor to lower the supply impedance and clean up the power supply in the local vicinity of the color amp. Adding a 10uF supply bypass capacitor to the collector of Q5 and bypassing the emitter resistor R66 with a 330-ohm resistor (Figure 4) lowers the impedance of Q5's output to 77 ohms and improves the color signal.

We aren't done yet. Point A in Figure 3 represents a summing node for the composite video signal going to pin 4 of the monitor jack. At this point, the Luminance signal from Q3 is summed with the Chrominance signal from Q5 to produce the composite video output. When the Luminance output is being used with a monochrome monitor, it is still coupled to the color circuit through R56-C54-R67. Leakage of the color clocking signals into the Luminance output is the source of the faintly grainy background seen in Figure 1C. Breaking the connection between R56 and the color circuit cleans up the monochrome output considerably, but at the expense of disabling the composite video signal which many people still require despite its mediocre quality. By installing a switch at point A, as shown in Figure 4, we get the best of both worlds: folks who use only the Luma signal can use the switch to disconnect color for optimum performance, while those who absolutely require composite video can have it at the flick of a switch.

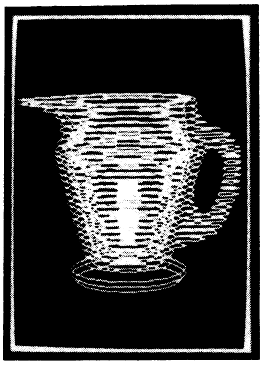
You might wonder whether a similar situation exists for the video circuits feeding the RF modulator. Point B in Figure 3 represents a summing node for the Luminance and Chrominance signals where they enter pin 1 of the modulator box. Simple inspection of the circuit suggests a second leakage path for color clocking signals into the Luminance output via R68-C55-L6-R54. Okay, the path is there all right, but we don't have to worry about it. The impedance along this path is so high that any potential leakage is severely attenuated, so isolation of Chroma from Luma along that route is pretty well maintained.

[Next month: Super Video for the 800XL, Part 2.]

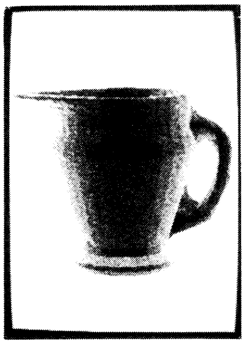
3-D MODELER FOR 8-BIT ATARI!

All of the pictures appearing on this page (except the top right) are unretouched TV-screen photos of 3-D models rendered by a new commercial 3-D shaded-modeler for Atari 8-bit computers.

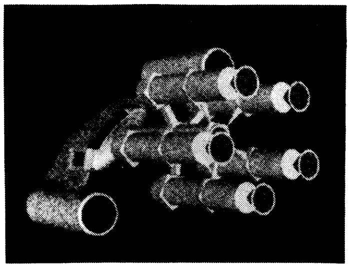
Two new programs!



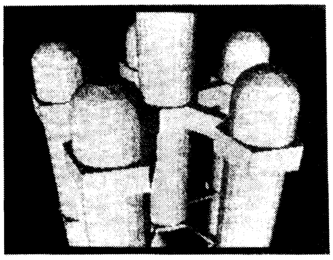
Pitcher, rendered by MODEL BUILDER (TV Screen Photo)



Same Pitcher ,rendered by SURFACE SHADER (TV Screen Photo)



Space ship, 5 cluster rockets (TV Screen Photo)



Close up of cluster rockets from the top (TV Screen Photo)

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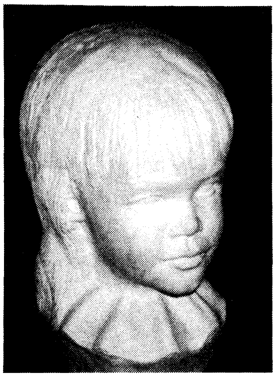
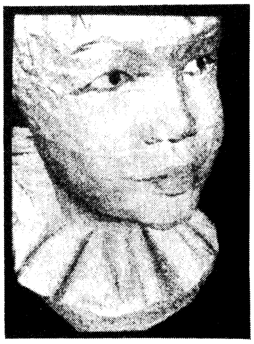
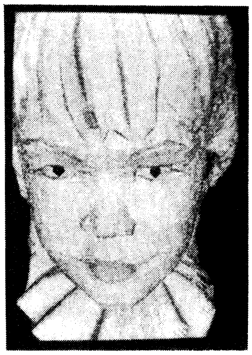


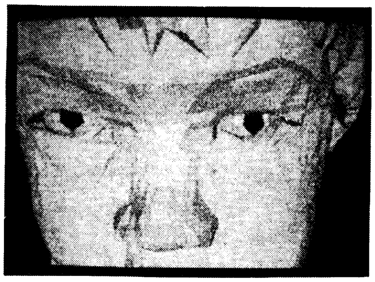
Photo of actual bust of human head



3-D model rendering (TV Screen Photo)



3-D Model Rendering (TV Screen Photo)



3-D Model Rendering (TV Screen Photo)

CopyMate, MyCopyR, and U.S.Copy

A Survey of 8-Bit Disk Copiers

By Ken Wickert

As the 8-bit VP for my usergroup (ACE of Syracuse), I copy quite a few disks, so I look for the fastest way to do it with the highest reproduction accuracy. The problems I've encountered are mostly with the Atari "enhanced density," the default density format with DOS 2.5 on a 1050 drive. Atari called it "dual density," the term I'll use in this article.

Disk Densities

Single density disks format as 40 tracks of 18 sectors each with 128 bytes per sector for a total of 720 sectors (40x18) and over 90 kilobytes (720x128) on one side of the disk (see table). Dual density disks format as 40 tracks of 26 sectors with 128 bytes per sector for a total of 1,040 sectors and 130 kilobytes. Double density disks format as 40 tracks of 18 sectors each with 256 bytes per sector for a total of 720 sectors and 180 kilobytes. (True double density on a 1050 requires a hardware upgrade, such as ICD's U/S Doubler.)

Disk Format	Tracks	Sectors	Total Sectors	Bytes/ Sector	Total Bytes
Single Density	40	18	720	128	92,160
Dual Density	40	26	1040	128	133,120
Double Density	40	18	720	256	184,320

Many disks I receive are in dual density format. I use it myself, and as I've not encountered any problems except for copying, I continue to use it. I seldom use true double density because not every 8-bit owner has an upgraded drive that can handle it, thus limiting the number of people with whom I can share programs or data. So, if you have a disk you want to copy and share with a friend--great! that's what PD is all about!--you'll probably want to look for a sector copy utility to do the job. Plain old DOS just takes too long.

Copymate

Now the fun begins. You might just assume you'll get an exact copy using any sector copier. *Surprise*--you might not! I've made this error several times. If you use *CopyMate 4.3* or *4.4*, you may not notice it misses the middle of the road density completely. If you don't know you have a dual density disk, you'll have a copy of the disk, but only up to the 720 sectors formatted in single density. (Remember, there are 1,040 sectors on a dual density disk.) If the source disk isn't quite full, your copy probably contains all that was on the original. However, if the source disk was completely full, your copy will be incomplete. You might not even realize it until you try to boot up the copy, only to discover executable files or valuable data are missing.

MyCopyR

MyCopyR is a good sector copier and will sense proper density of single, dual, and double density disks. Most of the time, anyway. The exception is when it's used on an Atari XF551, where it most always senses Single. Why? Well, I wrote to the author of *MyCopyR*, Glenn Smith, and the letter was returned unopened and unable to forward. Then I tried to leave him E-mail on CompuServe, only to be notified he no longer subscribes. Probably the hope of an upgrade or update is gone. *MyCopyR* properly senses density on a stock 1050 drive and on the Indus GT drive. (Note: the Indus GT drive won't write in dual density.)

Ed Hall, an erstwhile Canadian 8-bitter up in the Northwest Territories, claims he discovered quite by accident that *MyCopyR 2.1* will correctly sense dual density on an XF551 if you use the following procedure. Press [START] to initiate copying; as soon as a few sectors have been read, abort by pressing [OPTION]. Then press [START] again, and this time *MyCopyR* will get it right. You'll see the disk is being read in dual density. Not very elegant, but it works. Of course, you have to know ahead of time that your source disk is formatted in dual density.

I would like to use *MyCopyR* as my permanant copy program because it gives me the option to get a disk directory before and after use. This is important when doing a lot of copying as you can lose track of your work. The directory makes it easy to check your place. Without this feature, you have to back out of the copy program and go to DOS to get the directory. The *MyCopyR* DOC file states it will work with a memory-upgraded machine. However, it requires two passes using dual density, so I recommend using two drives since disk swaps are required when you have only one drive.

U.S.Copy

U.S.Copy by E. Reuss is by far my favorite copying program, despite the fact that you can't check the directory of a disk. Key features are that it works properly with my RAMBO upgrade and shows the RAM available on screen. It doesn't always sense dual density on the XF551 drive, but it does on the Atari 1050 and Indus GT drives. You really only need one drive. *U.S.Copy* only needs to read the source disk once and is the best for making multiple copies of dual density disks with an extended memory machine or a 130XE using single density.

The above copy programs are stock items in the catalogs of many 8-bit PD and shareware distributors who service our "Twilight Market." They will correctly copy a disk regardless of the memory of your 8-bit, but you must know the density of your source disk before you begin. They will also correctly copy *Print Shop* icon disks (which use a custom format single density).

I download quite a few files from GEnie or CompuServe. After inspecting the downloaded files, I'll assign them to individual disks. I use a file copier for this task. There are several file copiers available for use with the Atari DOS's (such as the COPYFILE selection in AtariDOS 2.0s or 2.5). Disk density isn't usually a problem since you format the destination disk yourself before converting it to your specially configured copy.

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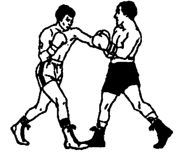
MyDOS 4.50 versus SpartaDOS 3.2D



8-Bit DOS Heavyweight Bout

by Charles A. Cole

Like a Saturday afternoon ringside fight beginning with the featherweights flailing their skinny arms and ending with the big bruisers crunching bones under hammer blows, my article "DOS Inventory" in the July *CN* was a warmup for the main event in the squareoff between 8-bit disk-based DOS's: MyDOS versus SpartaDOS. While perhaps lacking the hype of the "Thrillah in Manila," comparing these two DOS's is still very much a contest between heavyweights.

With the recent release of MyDOS 4.50 into the public domain by our Atari 8-bit SYSOP on CompuServe, Bob Puff, now is the perfect time to switch to that DOS if you are still using Atari DOS 2.0 or 2.5. For the benefit of those who may be contemplating just such a changeover to a different DOS, let's throw MyDOS 4.50 into the ring with ICD's SpartaDOS 3.2D and see what happens when these two titans start mixing it up.

The Local Favorite

Without meaning to scare off any ringsiders, let me point out that changing to SpartaDOS might require a near-total switchover, whereas changing to MyDOS is fairly painless since it's basically an upgraded, highly improved Atari DOS 2.0. The SpartaDOS disk format (and SpartaDOS itself) isn't totally compatible with Atari DOS, so you could still have to revert to Atari DOS or MyDOS to read previously acquired software.

During this discussion, in order to keep things relatively simple, I'll make two assumptions: (1) You are already familiar with Atari DOS 2.0/2.5, and (2) you have more than one disk drive. If you don't have multiple drives, it probably won't be worthwhile for you to make a change.

The first time you boot up MyDOS 4.50, the most noticeable difference in the screen menu will be additional options from which to choose, and an indicator at the top of the screen showing how many disk drives are on line and whether each is single or double density. If you have just acquired MyDOS, these will be set to default values which must be changed to your particular configuration. Menu choices A through N are the same as Atari DOS 2.0/2.5. Choices O and P have been changed from those on Atari DOS 2.5, and choices Q and R have been added.

Your first task is to select option O and get MyDOS configured to your hardware. You run through a menu of choices that let you configure hard drives, floppy drives, and RAMdisks. MyDOS can recognize hard drives configured at up to 65,535 sectors (16 megabytes). A 32-megabyte hard drive would, therefore, have to be partitioned as two separate drives. You will need to run through this menu for each drive you want to configure, up to nine drives if at least one is a ramdisk. Option P is used to select the density of the drive you're preparing to format--if it's adjustable.

Option I from the main menu, as with Atari DOS, is the FORMAT DISK command. If you don't immediately format a disk and save your reconfigured MyDOS to it, you'll have to invoke this routine every time you boot up. If you have a ramdisk configured, you must write MyDOS to your newly formatted disk with menu option H, copy the RAMBOOT.AUT file from the original MyDOS disk to it, rename it AUTORUN.SYS, and then re-boot your computer in order to activate that ramdisk. This module copies DOS.SYS and DUP.SYS to your ramdisk automatically upon bootup. With a 130XE, you should still have 387 free sectors in your ramdisk. You can delete DOS.SYS and DUP.SYS from the ramdisk to gain more usable sectors. Once you've gone through these setup procedures and saved a copy of your customized MyDOS, your system will automatically configure itself every time you boot up. If you then use your modified MyDOS to format more disks, they will also carry the new configuration.

MyDOS Warmup: Sparring with Atari

Atari DOS is, at best, only a sparring partner for MyDOS. One area where MyDOS would knock the socks off AtariDOS is the use of subdirectories. AtariDOS and MyDOS disk directories are limited to 64 entries, which means you can only store 64 files on a diskette before it is "full." There might still be a lot of room left on the disk, however. MyDOS's ability to create subdirectories allows you to overcome the 64-file limitation.

Let's suppose, for example, that you've just formatted a disk in double-sided, double-density format, which gives you over 1,400 free sectors. You have 100 small files you want to store on this disk. By creating subdirectories in which to store these files, you can store far more than 64, because each subdirectory can hold 64 entries, and the main directory can hold 64 entries, including subdirectories. You can even have subdirectories inside subdirectories. So, for our example, we could use option Q to CREATE SUBDIRECTORIES called BASIC, BINARY, ACTION, and MAC65, and then store up to 64 files in each of these subdirectories. You can, of course, give them any names you want. Using subdirectories also permits directory listings to load much faster: your drive only has to read the contents of a subdirectory instead of the entire disk.

MyDOS has improved on Option A, DISK DIRECTORY, by allowing you to simply type the drive number (1-9) instead of using Option A. If you prefer to go through the Option A routine, you can copy the directory listing to a text file or dump it to a printer as it is read.

Option C, COPY FILE, has been improved with the use of some additional options (/Q for query before copying, /S to skip all files with extenders of SYS, and /X, which prompts for disk swaps) and allowing drive specifiers to be skipped if you want to do your copying from or to the default drive.

Option E, RENAME FILE, works the same as AtariDOS except you can specify subdirectories and paths as part of the filenames. Option J, DUPLICATE DISK, allows an entire disk or only specified sectors to be copied. Formatting of the destination disk can be turned on or off. All the other menu selections-- B, D, F, G, H, K, L, M, and N are very similar or identical to their AtariDOS counterparts.

Are there any other advantages to MyDOS? If you have CSS's Ultra Speed Plus OS chip in your computer, an XF551 or US Doubler-equipped 1050 disk drive will read and write much faster (a 3-fold increase in speed). If you have CSS's 3-1/2" drive upgrade to the XF551, you gain even more read/write speed (possibly a 7-fold gain). I have both modifications, and the I/O speed approaches that of a Happy enhanced drive.

Does MyDOS have any shortcomings? I have encountered two. If you're running a program from a subdirectory that accesses the disk to get add-on modules, such as a high score routine or a different type font, MyDOS looks outside the working subdirectory (back in the main directory) for those files. If they are inside the subdirectory, this can cause an ERROR 170 (FILE NOT FOUND) message. Another problem, at least for me, is the 64-file-per-directory or subdirectory limit. With Daisy Dots III, in particular, I have over 64 fonts to store. If I try to create subdirectories for these files within the Daisy Dots subdirectory on my hard drive, I get error messages because there is no way to tell Daisy Dots III to look in more than one subdirectory for the fonts. SpartaDOS overcomes this problem by allowing more files per directory and subdirectory; the problem should be easy to correct in any future revisions of MyDOS.

SpartaDOS Weighs In

So now let's have a look at the challenger, ICD's SpartaDOS. First of all, you don't have a FORMAT command like Atari DOS or MyDOS. When you boot SpartaDOS, you'll see your version and copyright notice appear across the top two screen lines, followed by a simple "D1:" prompt.

SpartaDOS is a Command Line Interface DOS, very similar to MS-DOS for those familiar with it. In order to format a disk, you must call up the format module with the command XINIT. There are other commands used with version 1, written for 400/800 machines, and version 2, used with XL/XE machines, but I will confine this discussion only to Version 3.2D, which is more powerful than version 2 and also more compatible with the Atari DOS's.

XINIT will load from the disk and display format options on the screen. You can select the drive to format, the SpartaDOS version to use (NODOS, 1, 2, or 3), the number of tracks on a disk, the number of sides, the density, and whether or not to use high speed sector skew. High speed skew is valid for XF551 and US doubler modified 1050 drives. You are then prompted for a volume name for your disk. You can enter up to 8 characters. The format will then proceed, and SpartaDOS will be written to the disk. There is a NODOS option for data disks, which will allow more free sectors per disk. SpartaDOS is fully compatible with hard drives, and has the same 16 megabyte per partition limit as MyDOS. A disk's name can be changed at any time by typing CHVOL ‹newname› at the command line prompt.

Subdirectories are fully supported in SpartaDOS, as are batch files. If you have a RAMdisk to initialize upon bootup, you'll have to copy the RD.COM file from the main SpartaDOS disk and write a batch file to initialize it. Batch files are commands written with a word processor or the COPY command that instruct SpartaDOS to perform certain actions without user input. In order to initialize a RAMdisk, you need a single-line batch file reading "RD Dx" with x denoting the drive number for your RAMdisk. Name this file STARTUP.BAT, and it will be automatically executed every time you boot SpartaDOS. RD.COM will not erase the contents of a previously initialized ramdisk. With a 130XE, you will have a 1042 sector, double density ramdisk. Batch files give SpartaDOS considerable power, since many types of functions can be automated through them.

If you want to copy files to your newly formatted disk, put the original SpartaDOS disk back in your drive and type XCOPY. A special file copy menu screen, which is quite versatile, will be loaded. From this screen, you can tag files to be copied, untag files, change disk drives, and select subdirectories. XCOPY can be used with single or dual drives, in single or double density, and to or from both AtariDOS and

SpartaDOS disks. If you prefer, a simple command line of COPY Dx:‹filename.ext› Dx:‹filename.ext› can be used instead of the XCOPY utility. This is the fastest way to copy single files.

To view a disk directory, you type DIR at the command line prompt. To change to a different drive, type that drive's number first, then DIR. For example, if D1: is your default, but you want to see the directory of drive 2, first type D2: to change the default, and then DIR. An alternative, which will keep D1: as your default drive, is to type DIR D2:. This will also show the directory of drive 2.

SpartaDOS directories can hold up to 128 files, and subdirectories can also hold 128 files each. Subdirectories are created with the CREDIR command, and deleted with DELDIR. A directory can't be deleted if it contains files. CWD (change working directory), followed by a new directory name, will change the default directory. Including a drive number allows you to change to a new default directory on a different drive. TREE will display the directory tree (directories and their subdirectories) for the specified drive.

Instead of having a RUN CARTRIDGE option, with SpartaDOS you just type CAR at the command line prompt to activate an external cartridge, or type BASIC ON to activate internal BASIC in an XL or XE machine. Typing DOS will reboot SpartaDOS and turn off the internal BASIC or external cartridge. A batch file can be used to automatically go to BASIC or an external cartridge upon bootup.

File manipulations in SpartaDOS are nicely implemented. The COPY command can be used to copy single or multiple files (wild cards are acceptable) between two or more drives. Single drive copies require the use of a slighly different utility called XCOPY. Files can be deleted from a disk by typing ERASE ‹filename.ext›. The use of wildcards is permitted to automatically erase all files meeting certain criteria. If you erase the wrong file by mistake, UNERASE will recover it as long as you have not written over it with another file. SpartaDOS permits you to rename files by just typing RENAME ‹oldname.ext› ‹newname.ext› at the command line. Individual disk files can be PROTECTed or UNPROTECTed. Entire disks can be LOCKed or UNLOCKed.

If you have a lot of binary games that you would like to combine on a single disk and have a menu from which to select files, SpartaDOS has a special LOGOMENU program for this purpose. This menu allows you to run binary files with a single keypress.

For you hopeless menu addicts, SpartaDOS includes a menu utility that bears only a rough similarity to AtariDOS and MyDOS but is more powerful. You type MENU at the Dx: prompt in the command processor to load the menu. Rather than display DOS functions onscreen in alphabetized order a la MyDOS or AtariDOS, the Sparta menu displays a partial list of filenames in a neat box with a SELECT arrow (it will handle up to 100 filenames). Along the bottom of the menu screen is a bank of five boxes containing your DOS function selections. There are five such banks (accessed by pressing the number keys 1-5) for a total of 25 menu-selectable functions. By manipulating the arrow keys and the spacebar, you can select what function you want and which files are operated upon by that function. Most, but not all, of the DOS functions available in command processor mode are accessible from the menu.

For example, to PROTect a bunch of files on your disk, you can cycle through the function banks using the 1-2-3-4 number keys until you find the one containing PROT (it's Bank 4), then use the LEFT ARROW or RIGHT ARROW keys to illuminate the PROT box. You then use the SPACE bar to "tag" the files you want to write-protect (the tagged files are converted to inverse video), and hit RETURN. The SELECT arrow automatically moves from tagged file to tagged file, adds the "*" to indicate a protected file, and changes each filename back to normal video upon completion. The process is wonderfully efficient.

A feature unique to SpartaDOS is time/date support. You can initialize a time/date line at the top of your screen through a batch file. If you have the R-Time 8 cartridge from ICD, the time and date will automatically be set for you. If you don't have the R-Time 8, you'll be prompted to enter the time and date when you boot SpartaDOS; the Atari's internal jiffy clock will then be used. Every time you save a file with SpartaDOS, the time and date are also saved as part of the directory entry. When a file is copied with XCOPY or the COPY command, its original date/time entry is retained. You can change the date/time stamp from the command line with CHTD ‹filename.ext›. Wild cards are supported, allowing you to change the time/date stamp on multiple files. If you haven't set your computer's internal clock upon bootup and don't have the R-Time 8 cartridge, the time/date stamp will default to 3:59:00 pm on 1/1/84.

SpartaDOS rounds out its utility complement with driver modules for several communications devices, including ATR8000 and RS232 routines. There's also a 32 character type-ahead keyboard buffer module with an incresed key repeat rate and an RPM utility for adjusting disk drive speed. Similar to MS-DOS, there are MEMLO and MEM commands to reset memory boundaries; the number of file buffers can be set with a BUFS command.

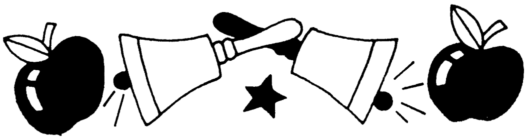
Finally, an entire disk can be checked by typing CHKDSK. This command will show you the disk's title and a randomly-generated 4 digit hex ID number, the number of bytes per sector of its format, the total bytes available on the disk, the number of free bytes, and the disk's write lock status.

And the Winner Is...

OK, so which is the best DOS to use? I'm not about to stick my neck out and say you should switch to MyDOS or SpartaDOS. They're both outstanding products that do exactly what they were designed to do, and do it well. I recommend you give both of them a try, and then decide. You might end up using both of them. I do.

If I really had a choice, I'd like to combine the two by either giving SpartaDOS the high speed disk I/O routine that's in MyDOS, or give MyDOS the directory capacity of SpartaDOS. As it is, when I run across a file not compatible with SpartaDOS, I use MyDOS. But since I'm running two hard drives, I use SpartaDOS whenever possible because of its greater directory capacity. If MyDOS's directory weren't limited to 64 files, I would probably use it on my hard drive.

We've rung the bell on the final round of our heavyweight DOS slugfest, and the judges have just announced the winner. By unanimous decision, the winner is YOU--if you're lucky enough to own an Atari 8-bit!



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STalker/STeno
A Winning Package

Review by Scott Dowdie

Top Notch Combination

Strata Software has released a two program combination that is really a winner: 1) *STalker*--a terminal emulator desk accessory, and 2) *STeno*--a text editor program/accessory. If you have a modem, you are familiar with the unending search for a Better Terminal Program. Many terminal programs offer certain features that give them a specific niche in the market place and I hope to explain the features that *STalker* and *STeno* have that make this package stand out among the crowd.

STalker

Since *STalker* is a desk accessory as well as a terminal emulator, it is fully GEM based and occupies its own window, complete with all the normal gadgets. Most other terminal programs seem to go out of their way to avoid an online GEM window, including the two most popular commercial programs for the ST, Antic's *Flash* and Intersect's *Interlink*. Why? GEM-based programs, with all of their mouse-based user friendliness, are generally slower than TOS programs. With that in mind, it is easy to see why *Flash* and *Interlink* are GEM/TOS hybrids.

The question is, Does *STalker* suffer because it is fully GEM based? Well, that is a tough question. After weighing all of the facts, however, I say... NO!!! *STalker* offers several features that make it stand out from the crowd and these features definitely justify any unavoidable deficiencies associated with fully GEM-based terminal programs. What are these features?

Outstanding Features

Background Operation. *STalker* offers background operation (from the desktop or from within GEM-based programs) of autodialing, auto-logon, text capture and file transfers. This background operation will certainly lead users into a comparison with Antic's *Shadow* product. *STalker's* background operation isn't as fully developed as *Shadow's* and a *STalker* file transfer won't survive a resolution change or system reset. Taking that into consideration, Eric Rosenquist (the author of *STalker* and *STeno*) programmed in support for the *Shadow* background transfer driver, and *STalker* may be used in place of the *Shadow* desk accessory to start, stop, or monitor *Shadow* transfers. I've used all of the background operation features and I can verify that, if you stay within the *STalker* guidelines (after all, desk accessories can only be accessed within GEM programs), you will be pleased with its performance. *STalker's* background operation isn't just for show.

Virtual Screen Size. To the best of my knowledge, *STalker* is the *only terminal program* that offers a Virtual Screen Size that is user configurable from 24 to 2,000 lines complete with session scroll back and a mouse selected portion that you can copy to the clipboard, paste to *STeno*, save to disk, and/or print, all separate from the text Capture and ASCII Receive functions. It is nice to be able to scroll back through previous text, and the ability to save a text screen or cut text portions out to be handled as desired is extremely handy when you don't have text capture or ASCII receive turned on. The virtual screen feature is something I have wanted (but couldn't have) from all of the previous terminal programs I have bought!!!

Multiple Online Sessions. *STalker* is the ONLY TERMINAL PROGRAM that offers multiple online sessions with Double Click Software's DC-Port serial port expander. Each online session has its own window and is fully independent. Can you imagine uploading to one BBS, batch downloading from a second BBS, and entering a message on a third—all at the same time? Of course it would require the DC-Port and three phone lines!

Autodialer. *STalker* has the best 20 number autodialer that I've seen to date including automatic RS232 port, terminal, and logon sequence settings for each selection. Also included is an optional cost counter, with a limit alarm, for long distance or pay services. It is easy to select multiple services that you want to connect with and let *STalker* rotate through them in the background until it gets a connect. Once you are through with one connection, a keyboard combination can be typed to dial the next selection on the list. I love *STalker's* dialer!!!

Remote Access. Remote (BBS) mode allows for password protected remote access to your computer. *STalker* has a built in Remote menu with [B]rief file listing, [C]hange directory, [D]ownload, [F]ull file listing, [G]oodbye, [R]un shell program, [T]alk mode, and [U]pload commands. All of the Remote menu commands can be done in the background with the exception of [R]un shell program and [T]alk (same as a Chat mode on a BBS). [R]un shell program allows for the running of an external TOS program (like a "Door" on a BBS) that will completely take over the system until it is exited. A TOS based program like *PC Command* can be run to do various file handling chores or run other TOS programs like ARC.TTP. There are certain guidelines that TOS programs have to follow to function properly from within *STalker*, so some testing must be done to see if the programs you want to run function properly.

Editor. Another of *STalker*'s fantastic features is... well, *STeno*. *STalker* uses *STeno* as its capture buffer. That means that if *STeno* isn't present, then the capture buffer features aren't available and the ASCII Receive to disk should be used instead. This leads to a discussion of *STeno* and how good it actually is.

STeno

OK, you've just read a lot of ranting and raving about how good a terminal program *STalker* is, but you aren't going to see me rant and rave about how good a text editor *STeno* is. It isn't as full featured a text editor as the shareware *MicroEMACS* nor is it as fast as MichTron's *Tempus II*. It really isn't fair to compare *STeno* to such grand efforts as *MicroEmacs* or *Tempus II* because neither of them can double as a desk accessory. If you are looking for a fairly fast, moderately powerful, easy-to-use text editor, then *STeno* will fit the bill perfectly. The beauty of *STeno* lies in its friendly user interface and its communication with *STalker*. *STeno* has an Apple Macintosh-like block selection interface that is truly unique.

Since *STeno* can be run as either a desk accessory or a stand-alone program, it has a dual personality. It has drop down menus that act differently depending on how it is run. When run as a desk accessory, *STeno* has pull down menus within its window and, depending on how the window is positioned, these pull down menus will pop up or down to best fit the display. This pop up or down action is hard to describe but it is something to see first hand.

When run as a stand alone program (by simply changing the .ACC file extension to .PRG), *STeno* has the normal GEM drop down menus. From a look at the various drop down menus, you can get a basic idea of most of *STeno's* features. You can also rather quickly determine that it wasn't designed to be the "end all" text editor.

STalker and STeno Together

When *STeno* is used as a capture buffer/editor in conjunction with *STalker*, it makes *STalker* a truly complete terminal program with the best buffer features available in any terminal program. *STalker* senses *STeno* whether *STeno* is run as a desk accessory, or if *STalker* is called as a desk accessory from within *STeno* and run as a stand alone program. Incoming *STalker* text can be sent to *STeno's* window buffer by simply turning STalker's Capture Mode ON. A simple way to switch back and forth between the *STalker* and *STeno* windows is to hit the window switch hot-key CONTROL-TAB.

Documentation and Packaging

STalker comes modestly packaged with a shrink wrapped manual containing one single sided floppy disk. The documentation comes in two forms. There is a 56 page, 7" x 8.5", large type, nicely printed manual as well as Version Update text files on the program diskette. There have been some major changes in the programs since the manual was printed and careful reading of the manual supplements on disk is a must to get full usage out of the product. Overall, the documentation is complete and well done, including many illustrations and screen shots.

Conclusions and Predictions?

STalker is a true, full featured terminal program especially when used with *STeno*. There are a few features that some users might miss in this program combination that are important to point out. The absence of a script language, a limited amount of terminal emulation types, and the lack of a few popular file transfer protocols may rule *STalker/STeno* out for some users who have these specific needs.

People who use the PC Pursuit pay long distance service and might miss *Flash*'s script language. People who have some very specific terminal emulation needs, other than ANSI or VT-52, might want to use Simon Poole's very popular *Uniterm*. So far as file transfer protocols go, *STalker* isn't as robust as some other terminal programs. *STalker* offers Xmodem in several flavors as well as Ymodem Batch for file transfers; but CompuServe users will definitely notice the lack of the CompuServe specific B protocol and many users who have grown accustomed to Zmodem might not want to go back (so to speak) to *STalker*'s Xmodem or Ymodem Batch.

For the majority of us, the *STalker/STeno* combination is a fantastic value at a suggested list price of $30.

It is rumored that Eric Rosenquist is in the process of converting his Megamax *Laser C* source code over to Borland's *Turbo C* (available from Germany) for a noticeable program speed increase as well as adding Zmodem and a script language.

If you would like more information on the combination, or would like to place an order directly with the manufacturer, you can write or call the following.

[Strata Software, 94 Rowe Drive,
Kanata Ontario Canada, K2L3Y9
(613) 591-1922.]

by Don Elmore

I really used to like Susie! Oh, Susie is a very important half of L & Y Electronics, one of the few Atari dealers still serving Atarians in the National Capitol area. My printer recently decided to stop printing, so I took it to L & Y to have John (the other half) coax it back into printing. While there, my former friend, Susie, tried repeatedly to convince me to try "just one Lemmings screen." I did.

In fact, I tried several screens ... bought PSYCHNOSIS's *Lemmings*, brought it home and have focused on little else since. To say that it is maddeningly addictive is the understatement of the decade! The well designed manual describes "Lemmings" as "helpless hordes of mindless but delightful creatures...", dropping through a trapdoor in each level and then it is up to you to safely guide them through a vast array of obstacles to the exit. Sounds easy doesn't it?

Doomed Without Your Help

Hah! The "Lemmings" look a bit like little, green-haired smurfs...extremely cute and extremely dumb. Without your help, they simply take off walking straight ahead. Regardless of what's straight ahead. They'll walk off cliffs into the sea (or fiery lava), they'll bump into walls or columns and then head back in the other direction. However, you do have some resources to draw upon. Various skills are available, and you can bestow one (or more) of the skills on selected Lemmings. All Lemmings are Walkers when they first drop through the trapdoor.

Your first Lemming tool (see box on page 59)is a Climber. He climbs any vertical surface. Next is a Floater, who opens his "brolly" and gently floats down from whatever surface he has walked off of. The next one is a Bomber. Select that window, click on a lemming, and you will see a visual countdown to self destruct, from five to one, some cute shaking, and Boom!

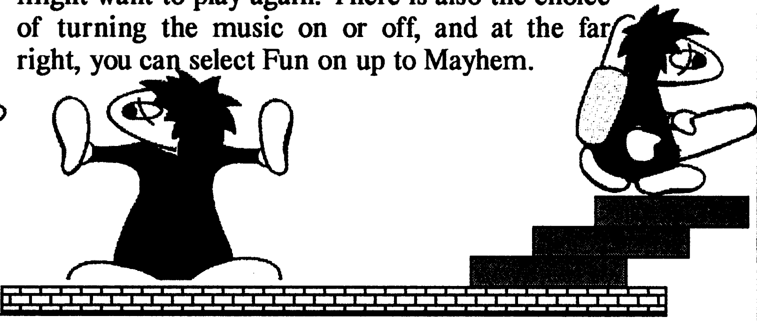
Blockers & Builders

After the Bomber, you have a Blocker. He's the one I use most. He keeps the rest of the critters from walking off, or on or into something. Next to the Blocker is the Builder. He has a backpack full of flagstone bricks and will build a stairway for you, wherever he is activated. After laying 12 stairs, he pauses and shrugs at you. If you click on him again (and still have Builders remaining on that level), he will "do" another 12 steps ... etc. If you don't, he reverts to the Walker and wanders on in a straight line, after dropping off the end of the stairs he has placed.

The fellow next to the Blocker is a Basher, he digs horizontally in a straight line. Then comes a Miner, who digs downward at a 45 degree angle and the digger that appears to be swimming is a Digger that burrows vertically. A window that is definitely the one most used in this household is the pause button, which looks like Bear paws. Get it? Pause. Well, never mind, that is the first button I hit to stop the game before the trapdoor opens. Then, I carefully scope out the terrain (or lack thereof), plan my strategy, pray to the computer game gods, and then turn off the pause and freak out!!

The four general game catagories range from Fun, to Tricky, then Taxing and, finally, Mayhem. Each category has 30 increasingly difficult levels. Can I write a comprehensive review after completing only 25 levels of the Fun category? You bet your sweet bippy I can!! The game manual recommends that you begin with at least a few of the levels in the Fun game. I recommend that you try all 30 of them.

Your first screen allows you to choose either a one player, or two player game, or allows you to select a level. Upon successfully completing a level, a ten letter "code" is displayed. Copy it down and then when you start out, you can skip the previous levels played and go right to the last one, or any other one that you might want to play again. There is also the choice of turning the music on or off, and at the far right, you can select Fun on up to Mayhem.



Awesome Graphics

Each level has a name and some important data for you. You are given the number of Lemmings that will be released, the percentage of them you must save to go to the next level, the release rate (how fast they drop through the trapdoor, and finally, the time allowed. For example, Level One, called "Just Dig," releases 10 Lemmings with a release rate of 50 and you are given five minutes to save at least ten percent of the Lemmings. That's one!

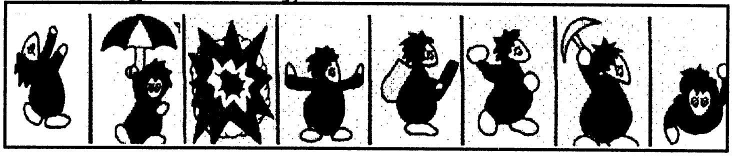
After pressing the mouse button, the game screen appears. The icon line across the bottom (see below) has the number 10 in the Digger box (next to the Paws). The Lemmings drop into a cavern running across the screen from left to right. There is a second cavern about 20' below the first one. No connecting tunnels, so you highlight the Digger box and then click on one of the Lemmings, who then begins to dig his way through the floor to the cavern below. The graphics are awesome. As he digs, you see handfuls of dirt tossed back over his shoulders! When he digs clear through, he and the other nine drop down and walk to, and out the exit doorway. You get a congratulatory message, and are given the ten letter code for that level.

Level Two is titled "Only Floaters can survive this," another ten Lemmings with 10% to be saved, in five minutes. The game screen shows three columns under the trapdoor, and when the Lemmings reach the right side of the third column, you (after having activated the Floater icon) click on each one and they "brolly" their way to the ground and walk out, through the exit. If you fail to click on any, he does not "brolly," he plummets and splats on the ground, with some interesting specks splashing up!

Level 24 in the Fun category is titled "Konbanwa Lemming San," consists of trying to save 66% of 30 Lemmings with a release rate of 90 and a five minute time limit. You don't even want to know what that screen looks like!!

Each screen is different and requires a slightly different approach. There is no single, schoolbook solution. You can do whatever you want, as long as you save the required percentage in the time alloted. In the Fun game, even though each level is harder than the previous one, there is ample time to save 'em all. In the more difficult games, time becomes a crucial issue.

I have used the "Nuke 'Em" icon quite often. The obvious solution is not always easy to implement. While I have blocked one side of the Lemmings movements, and left one Builder making his stairway, I concentrate on his reaching the 12th brick so I can send him up for another 12, and then, when he has finally reached the top of whatever we were heading for, I am ready to blow up the Blocker and let all of the remaining Lemmings head for the exit. But, guess what? There are no remaining Lemmings. While I was carefully watching the Builder, they all hit the Blocker, turned and walked off the other side of the screen, into the sea!! So, all you can do is "nuke" whatever is left and play the level again, either changing the strategy, or paying a little more attention to what is going on with the rest of the Lemmings.



Two Player Option Is Tricky

As mentioned above, there is a two-player game, but it really takes getting used to. I tried following the instructions in the manual, and plugged a second mouse in the joystick port and got absolutely nowhere! The two player game divides the Lemmings into blue and green critters and splits the screen right down the middle. At the bottom of the screen, there are two flags, one green and one blue. The playing field has two exit tunnels, one green and one blue. Forget about trying to get the second mouse to work, use the joystick!!

The instructions state that the left player controls the blue Lemmings and the right player, the green. They do, but it really takes some concentration to control them. The two-player game consists of 20 levels without any different categories. Of course, each level becomes more difficult. Each player starts off with 40 Lemmings, and the Lemmings saved are added to that player's initial 40 for the next level. Bottom line is that you have to really work at it to get the two player competition going.

A Habit You Won't Break

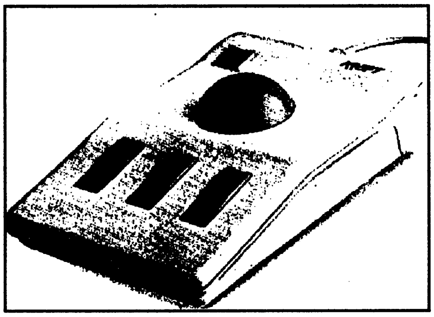
What do I like about the game? The graphics are superb. The critters are cute. The game is addictive. What don't I like about it? Well, the only thing that I had trouble with, is seeing the icons along the bottom of the screen. From my tired old eyes, it is hard to distinguish between the three types of diggers, and you don't have a whole lot of time to stare!

At my present success rate, I figure that I should "ace" the Fun level at least by the end of the year. And, if the three higher categories are exponential in difficulty and I continue to suffer from my digitary pschyomotor retardation, well, I have finally found something to will to my children! A very definite thumbs up for this game!!

Having a Ball with Your ST

A Comparison of the Track and Best Trackballs

Reviewed by Sam VanWyck



It began with the old WICO trackball; the one that allowed the player to rack up massive scores at *Defender* back in the 8-bit days. A phenolic cueball mounted in a square housing with a button in one corner, it was useful for a very limited number of games and that was about all it did. When first out, it cost around $70, a very substantial amount almost ten years ago!

It was heavy, awkward to hold, and was usually placed flat on a table or desk and manipulated with both hands; the right hand rolled the ball while the left activated the fire button. For what it was able to do, it worked well. It was not, however, a substitute for a real joystick or mouse!

The Next Generation

With the advent of the ST computer, Mouse Management rapidly became second nature. Even the interrupted sequence of move left-pick up-carry right-put down-move left when sweeping the cursor across the entire width of the screen becomes automatic. Point, click and drag become actions requiring no thought, merely the intention. The ease of use and durability of the Atari mouse make it a perfect interface for the computer user. Thus, little incentive exists for messing around with a properly working combination.

Unless, of course, someone hands you a new toy and challenges you to "Try it!" If that new toy happens to be a trackball set up for the ST, the urge can become well nigh irresistible.

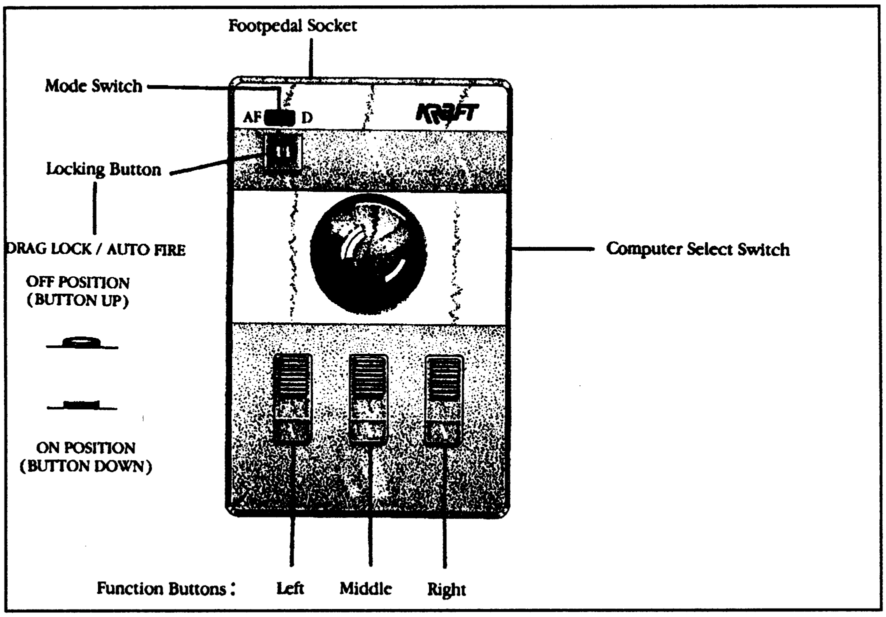
So, having obtained trackballs (*Mouseballs,* some are calling them) from both the *Kraft* and *Best* companies, it seemed prudent at least to try them before dropping them into the "swap" pile to await the next Atari *Oktoberfest.* The *Kraft* went to the office while the *Best* stayed home.

The *Kraft* unit is 4 1/2 inches wide and about 8 inches deep. The top of the ball stands approximately 2 1/2 inches above the desktop. With the index and middle fingers controlling the ball, the heel of the hand rests comfortably on the desktop and the thumb is poised over the left function button. About an inch and a half to the right is the "right" function button which may be operated either by the thumb or index finger.

An inch and a half to the right of the center button is a third button. This is also the "left" function button, even though it is placed all the way to the right. A left-handed operator would normally want to operate the most used "left-click" button with the thumb. So, *Kraft* very thoughtfully placed this function on both sides of the "right-click" button at center. As a result, left-handed operators may use the system comfortably without turning themselves into pretzels while trying to cope with a world designed by and for right-handers. A nice touch, *Kraft!*

In addition to these are three additional controls. A three-position switch allows compatibility with the Atari 8 and 16 bit units as well as the Commodore 64 through Amiga. In the top left corner, a two position switch sets the action of the "fire" button from single shot to rapid fire while a locking pushbutton holds the left switch in the "ON" or drag mode.

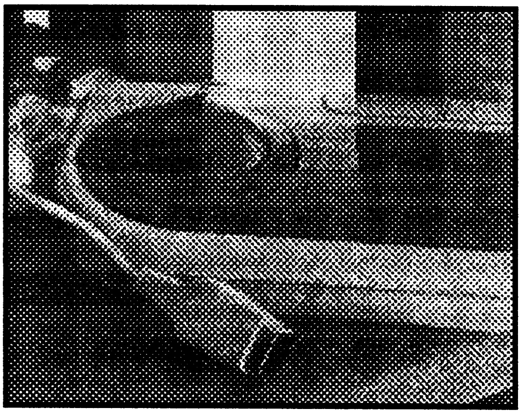
At the rear is a terminal for a footswitch. Connected via a stan-



dard telephone line extender, this option allows the left button to be activated by foot, permitting the hand full freedom to concentrate on controlling the ball. Obviously, *Kraft* intended to make its trackball as versatile and convenient as possible. The unit comes with a 5-year limited warranty.

...And in the Other Corner...

The *Best* trackball operates with an entirely different configuration. Here, the right thumb controls the ball while the index and middle fingers activate the right and left buttons. The footprint dimensions are six inches wide by four inches deep, while the top of the ball is about 2 1/4 inches above the table. The height of the unit and control placement make operation almost effortless. As with the *Kraft* unit, the heel of the hand rests comfortably on the tabletop.



Early on, a distinct roughness developed in the movement of the ball. No instructions were included so access was gained by removing the assembly screws and splitting the case. Accumulated crud was removed from all three rollers which support and track the ball, resulting in smoother operation. It was noted that the trim ring holding the ball in place could be unlocked from topside so as to provide easier maintenance access. The *Kraft* trackball must be disassembled for cleaning.

Showdown

This time, let's get to the bottom line first! I found both units easy to work with and very effective at controlling the cursor. The initial change from mouse to trackball was almost effortless. Most surprising was the discovery that shifting from the *Kraft* at my office to the *Best* at home was absolutely no problem at all! Despite their differences, the transition from one to another required no conscious thought. This, I am certain, is due to the excellent design of both units rather than any degree of superdexterity on the part of the reviewer!

As with any new equipment, a period of initial disorientation and experimentation marked the first attempts to use either trackball. For instance, absent-mindedly grabbing the trackball case and sliding it about the desktop accomplished nothing at all (beyond embarrassing the novice operator). With the mouse accelerator engaged (see below) it was very easy to overshoot vertically requiring a lot of extra clicking to dismiss an unwanted menu.

Since one's thumb is not ordinarily a precise nor fast-moving digit, learning to position the cursor (*Best*) or double click the left button (*Kraft*) was probably the most difficult physical adjustment. The use of a mouse accelerator greatly enhanced the overall effectiveness of both units. Without speed enhancement, it requires approximately three rolls of the ball to move the cursor across the screen in medium resolution. Using Atari's Mouse Accelerator 3.3, it is possible to accomplish the same sweep with a single touch. In fact, except for a full sweep, corner to corner, just about any position on the screen may be reached without lifting the finger from the ball. Except where ultra precision is needed, an accelerator is recommended.

They Really Are Easy to Use!

After using the trackballs for several weeks, I feel that the learning curve has begun to flatten out a bit. While neither is as fast or precise as a mouse, the actual differences are quite small and will not be a factor in my ultimate decision as to which to use after this review is finished. For the moment, I will probably continue to enjoy the convenience of not having a mouse pad to keep clear nor a cable to snarl. However, were extra speed and precision needed for an arcade-type game, the mouse would probably reappear.

One action that neither *Kraft* nor *Best* will allow is giving the ball a spin to drag the cursor rapidly to the edge of the screen. *Roll* the ball and the cursor follows perfectly. But give it a quick flip so it spins by itself and virtually nothing happens. Beyond a certain speed, the optical sensors in both units are unable to count individual pulses properly and the cursor will move only slightly in the desired direction or even back up.

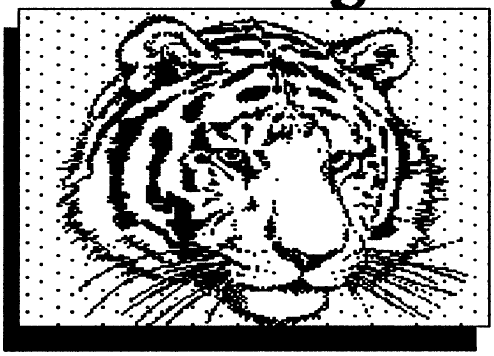
For the right-hander, both trackballs offer approximately the same level of convenience.

Naturally, a test drive would be the best way to find if one could ever replace your trusty mouse. If you are subject to space restrictions at your workplace, either trackball might prove invaluable. The lefthanded operator will find that only the *Kraft* offers the option of ambidextrous operation. For the gamer, it also has the advantage of rapid-fire action. It is the only one adaptable to machines other than the ST.

The *Best* trackball places the function buttons under the same fingers as the mouse and thus would be a mite easier to learn.

BEST Electronics, 2021 The Alameda, Suite 290, San Jose CA 95126. Kraft Systems, 450 W. California Ave., Vista CA 92083. Around $50 - $60, depending upon discount.

Image Cat



Print a graphics catalog of your clip art disks.

Many file formats supported, easily used.

Review by Bill Moes

It doesn't take long.

Collect a few graphics files here. Pick up some public domain clip art disks there. Purchase a couple fancy art disks from a mail order outfit. You never know when you'll need that picture of the intricate twining of ivy around a majestic tree. Or even the one of Mickey Mouse.

But when we do need a specific graphic, well, it can be quite a time-consuming search through dozens of disks to find something specific. Most of us have been through the process of slide show programs. Too often we settle for the first graphic that fits, rather than just the one we're after.

Desktop publishing on the ST, a relatively easy process with several quality software programs available, encourages our collection of clip art disks. But that collection too often sits, puddled off in a corner . We each probably have a disk or two (or twenty) with unknown picture files. Never seen, never used.

Image Cat solves the problem.

As a graphics cataloguing system, *Image Cat* will print reduced-size copies of images from clip-art disk collections. The basic process is very easy and straight-forward.

Run one of three programs for the type of file format in which the pictures were stored. Check to see that the printer driver and disk drive path are correct. Print 'em out. That's all there is to it.

Printer drivers are supplied for the more popular ST printers. Just click on the appropriate choice. Setting the drive path is as simple as using the GEM file selector to access the drive directory. Specific graphic files are not chosen, only the floppy/hard disk drive path. It's possible to fill in an editable line (41 characters) of information to identify the source disk for the graphics. This line will then be printed at the top of each printed page of graphic images.

It's possible to print only odd or even numbered pages if you're going to print the other on the back side. It's also possible, of course, to print the pages in the normal order.

Image Cat is composed of three programs, each of which will catalog certain file formats. All three may be run separately or called through a shell-type program. The software uses menu icons for selections; GEM is not supported.

The PIC CAT program will catalog/print formats used in *Degas Elite* (standard and compressed), *NeoChrome*, and the *Tiny* formats. All three ST resolutions are supported. Eighteen screens are printed on each page and the file name is printed below each screen. It's possible to select only certain supported formats for printing. Just print *Degas Elite*'s low resolution, for example. When printing low resolution graphics, PIC CAT can use one of several dithering techniques to select shades of grey for each actual color from those graphics. The technique you choose is selected on a separate menu screen.

The IMG CAT program will catalog and print graphics saved in GEM's IMG format. It's possible to select the number of IMG graphics printed on each page (6, 12, 15). The actual IMG image size (# pixels X # pixels) may be printed below each graphic with the file name.

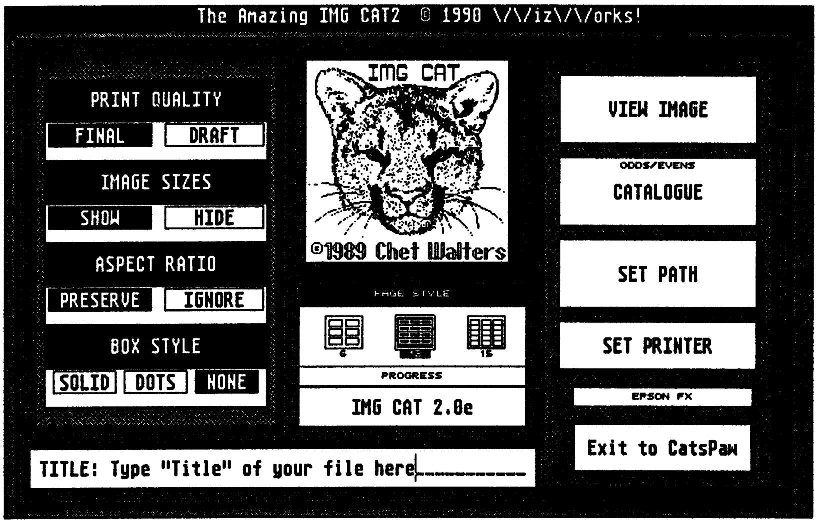
The MAC CAT program will catalog graphics saved in the MAC format used by *Claris MacPaint* for the Macintosh computer. The documentation states the only ST program that saves in this format is *MVG (MultiViewer Graphical)* ($59.95), available from the publisher of *Image Cat*. Migraph's *Touch Up* saves in a pseudo MAC format, according to the documentation, and this is also supported by MAC CAT.

When printing, it's possible to place a box (line or dots) around each graphics screen or to not have any box. Defaults for many of the settings within the program, such as printer selection, may be saved to your program disk.

I printed the graphics using an Epson 9-pin printer (RX-80). They were printed very clearly, despite the large number of images on some of the clip art screens.

The printing process is very similar to that used in desktop publishing programs, such as Timework's *Publisher ST*, in that it does a slightly offset double-pass before moving on. This results in a very dark, clear printout. It also takes some time, about the same as the desktop publishing program takes to print a page on this printer (almost 15 minutes).

The documentation is a 16-page booklet, professionally prepared and reasonably clear and helpful. The disk is not copy-protected and the program may be installed on a hard drive. *Image Cat* was written by Chet Walters. Mr. Walters is also the author of *Mug*



Shot! ($39.95, CN Jul/Aug 1991).

A recent advertisement for *Image Cat* states the earlier version reviewed here has been replaced by *Image Cat* (v. 2.0) and now supports additional graphics file formats, including .GEM, .NIC, .ICE, and .SHP.

I had no problems using *Image Cat* ($37.95). It worked easily in printing a graphics catalog of my clip art disks. It's a sophisticated solution to the common problem of seeing those disks remain unused because we don't remember what graphics they contain. Now we can see what they've been hiding.

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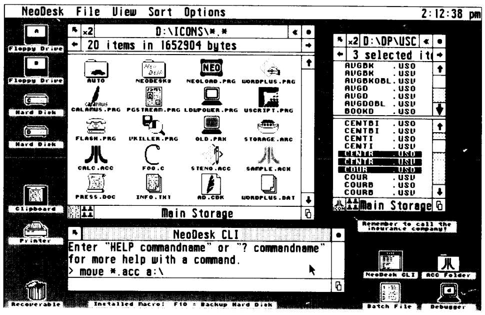

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Keeping in Touch

by Mike Heininger (c) 1991

Huh? What'd He Say?

Owning any personal computer, but maybe particularly an Atari, sooner or later obligates mounting an indignant defense commensurate with the rabidity of an attack upon whatever poor feature is deemed so dastardly as to wring wrath from the insensate cocoon in which many of us conduct our timidly orchestrated daily lives.

The boss may be a perfect genital approbation, but will we confront her or him? Unlikely. Then no matter what the provocation, how can we so facilely malign our beloved computer upon which we confer intimacy to a degree imprudent with business associates? If this dear machine in which we trust ever disappoints us, oh the venom we spew! And whom do we spew upon? The machine? We'd like to. But rather than compromise our investment with a good smack, we teeter in our ergonomic chair and froth until the dog slinks away.

Less Than Crucial Complaints

Or ... some of the violated write heart-rending treatises that whine about the color of the monitor screen, condemn the feel of the keyboard, mock the shape of the function keys, or excoriate the proliferation of cables. To our collective credit, so far none of us has publicly bemoaned the protective tape curling up from one edge of the Atari 1040ST keyboard nameplate. It is good that in this matter we are strong.

Some of our British co-computerists merrily brand the Atari screen color default "puke green." Their preferred alternative is a somber blue-gray matching their islands' dreary climate. Only that pervasive damp could foster such intemperate thoughts as slandering the primary color in Mother Nature's temperate land zones.

Other critics succumb to primal bonding with a precomputeric IBM Selectric typewriter keyboard. At least one manufacturer panders to this atavistic compulsion by selling reinforcement springs. What aberrant personality meticulously pries up 84 wee key caps to insert springs underneath that will stiffen the keyboard (translation: make it harder to type on)?

How 'Bout Them Trapezoids?

Agreed: the trapezoidal shape function keys are stylish but potentially dysfunctional. Yet who has required psychiatric counselling to get in touch with the right function key? Did the unusual shapes make us more attentive or are we just lucky?

In the spirit of Solomon let us not chop our output to settle these issues. Here are the correct answers:

↖ The Atari 1040ST keyboard has an excellent touch and needs no apology to any detractor no matter how demented.

↖ The default green background on the color monitor is by far the most pleasing color and has never been equalled by any understudy, including other greens, blues, or reds.

↖ The trapezoidal function keys are delightfully Atariish.

↖ But—that transparent tape peeling off the Atari keyboard name label does need better adhesive.

Gentle people that Atarists are, how noble that we do not lament WordPerfect 4.1 that (a) uses the ESC key to activate key repeat (i.e., hit ESC, tell the little box that pops up what number your repeat count is [e.g., 12], then hit the key you want to be repeated that many times [e.g., f]—an esoteric feature that should NEVER be initiated with a key that says ESCape), and (b) fights a fast typist by suddenly either racing off with letters untyped or slowing down as if it's panting just seconds before crashing!

Let My Cursor Go

Nor do we sniffle about *Quick ST II*, the screen speeder-upper that kidnaps the cursor during the edit mode of *VIP Professional*, and gives a little extra-carriage-return-like bump to the opening screen of *EZ-Track Plus* to render it essentially inoperative. Someday glitches like these, presumably, will be fixed—unless the companies deem Atari users not profitable enough to bother satisfying. In the interim, it may not be totally deluding to tolerate such irritants as growing pains inevitable in something as miraculous as a personal computer system.

Unfortunately, such global charity discounts dissatisfied cripples who correctly point out they are not oysters who will produce pearls from product irritation.

While difficult to retain healthy perspective sifting the organic from the cosmetic in evaluating computer performance, perhaps the plight of nitpickers struggling to find suitable targets may be summarized by paraphrasing another famous strikeout:

Oh somewhere in this favored land Ataris shine so bright,
The sales are growing somewhere, and somewhere bugs don't blight,
And somewhere all are laughing, and somewhere owners shout,
But there is no joy in Nitville—
Sitting ducky is plucked out. ✂

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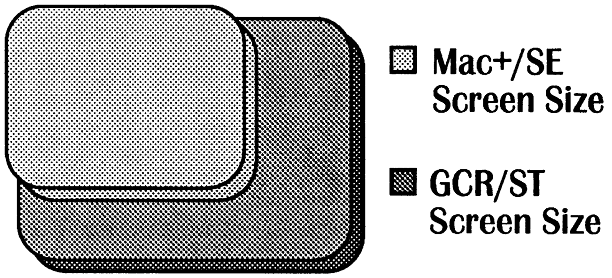
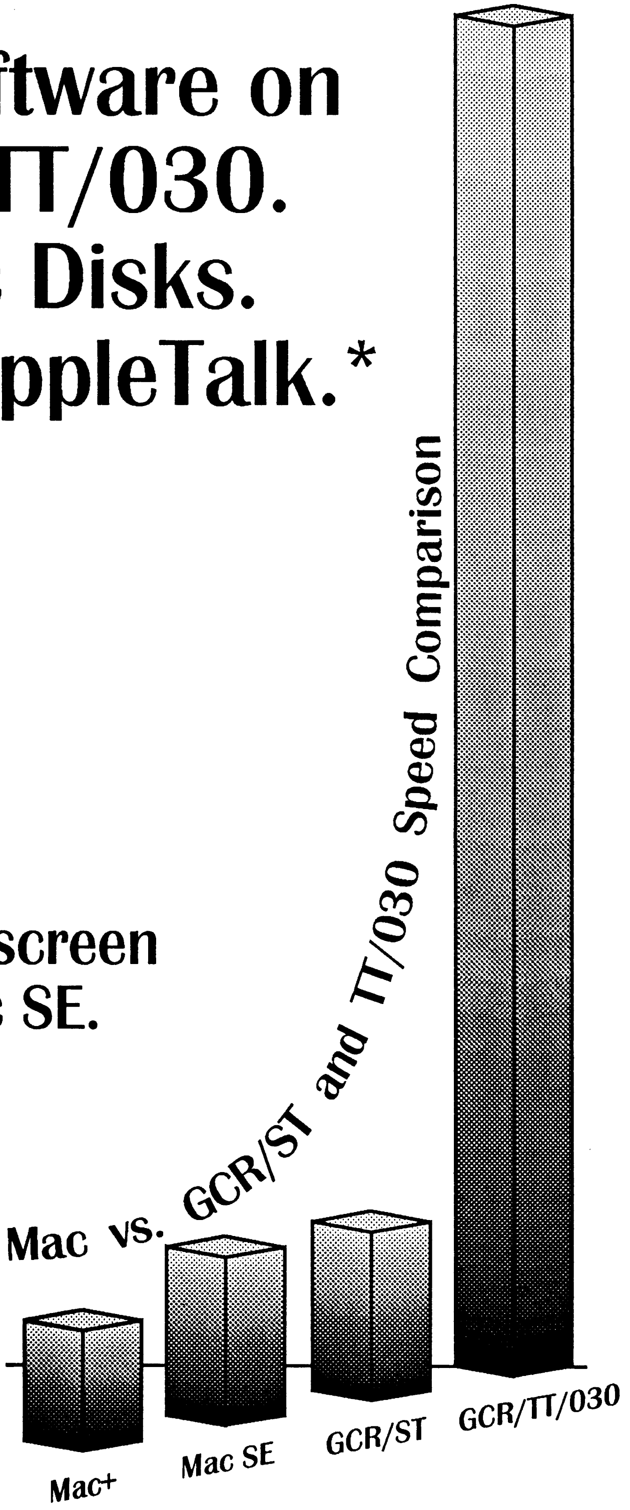


GCR has a 30% larger screen than a Mac Plus or Mac SE.



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A History of the Atari ST

Part 2: 1988 to 1991

by Bill Yerger

[This is the second in a two-part history of the Atari ST. In Part 1 (CN, July/August 1991), Bill reviewed the early years (1984-1987). This month, he carries the story forward to the present.]

In 1988, according to Dataquest, Atari was the fifth largest computer company in the world with $500,000,000 gross in comparison with Apple's $5 billion and IBM's $50 billion. This was the year of Atari's desktop publishing bundles. First Mega 4's with *Publisher ST* and a hard disk without Postscript, and later with *Ultrascript* thrown in. In early 1988 Larry Samuels got the ax. Mike Dendo took his place and immediately said Atari was going "to quit lying." No products would be announced more than a month before delivery. The mail order would be stopped. Atari advertisements were going to come with such a rush that we would all be surprised, and Atari would be bringing out their new machines. There were fewer than 300 dealers suddenly and so Atari would be rebuilding. There would not be any television advertising until there were more dealers.

Shortages, however, prevented the dealer base from expansion, and mail order never really decreased. The truth was that Atari liked selling machines, and the places like One Stop, J&R, ATY, and Microtyme, which blatantly sold mail order in contradiction to their BCC contract, were overlooked by Atari. But from a dealer's point of view, when Sam Tramiel canceled the co-op advance funds for advertising (3% of purchases) and repair advance funds (also 3%) in late '88, a view of the future was at hand, for here were probably the most serious reasons to date for a dealer to pull back from the Atari line.

Europe Enters Stage Center

Meanwhile, machines still sold, and some U.S. dealers managed to survive. Overseas, however, Atari began to exhibit a substantial growth. Bob Gleadow, president of Atari U.K. in responding to the question, in *ST User* U.K., "to what do you attribute Atari's success here and their lack of it in the U.S." replied "We live an unTramieled existence." Whatever the reason, the 520 was swiftly becoming the best selling game machine in England. The games from England had always been good, but in '88 they overwhelmed the market much as English rock had in the sixties. The Atari 520 ST was by far the cheapest 16-bit color computer in the world, and in England it edged out Nintendo for games because Nintendo sold for about $200 there and the games and machines were designed originally for NTSC (USA standard television) instead of PAL as used in Britain. In Germany, the ST was swiftly becoming the poor man's business computer.

While U.S. Sales Shrink

In the states, Atari enthusiasts also shared these reasons for buying the ST, but no niche was found except for music. As a result, Atari's sales went down from about 125,000 U.S. sales in 1987 to about 48,000 sales in 1988. England achieved about 100,000 sales in 1988, and Germany had over 200,000. In 1988 the DRAM shortage hit and Atari blamed this for almost losing the American market completely. But one of the real reasons, in all probability, was lack of exposure. Every computer company had DRAM problems and the solution was simply to charge what had to be charged to get the machines in and out the door. Atari was actually in a pretty good position because they had contracted for cheap RAM. However, they became embroiled in a lawsuit involving the cheaper DRAM's and could not deliver enough product to cause their dealer base to grow.

Underlying this was a refusal to advertise, the same nemesis that has beleaguered Atari since 1985. Jack Tramiel wa reported to have said that until the American consumers demonstrate they will buy Atari machines, Atari will not advertize. On a calculator, would that be called "Polish notation?" or just a twist in logic?

By this time Atari was well represented on Genie and CompuServe and there were several on-line magazines such as *ST Reports* written mainly by Ralph Mariano under the nom de plume of Rex Reed. Another on-line magazine was *Z-Net* featuring John Nagy and others.

Compute ST was the first publication to back out of the ST market. *Start* had a circulation of about 48,000 at this time and was essentially at the top of the heap of ST publications. A new entry, which had grown from an area-wide user group newsletter into an independent magazine, was *Current Notes. Current Notes* was very well written and had such notables as Dave Small as a regular contributor. *Current Notes,* struck a middle ground, with no polished paper and few pictures, but with good, informative writing and an editorial slant, directed by Joe Waters, at the truth, if it could be uncovered. This was something untried by any of the bigger magazines, although occasionally seen in Nevin Shalit's "Rumor City" inside *ST Informer.* The simple truth was Atari's lack of advertising and ill conceived use of the media had convinced many developers and others, such as *Compute,* that the ST would "never be supported," i.e. Atari would not promote its own computers and help those on the periphery to make money.

COMDEX Encourages Hope for 1989

By Comdex 1988, Atari's big hope was the music industry. Wayne Smith and Frank Foster put together a program which made for steady sales and high visibility of machines in major studios and recording companies. Atari had the Gold Room at Comdex and put on a show there with Fleetwood Mac. At their developer party, Sam Tramiel showed the STacy and said it would take the music industry by storm in 1989. *Pagestream* had just been released by Softlogic, and *Wordup* from Neocept was just coming to the market. The Gold Room was filled with Atari developers and the future still looked bright. Jack Tramiel saw me in the hall and apologized that '88 hadn't been very good, but promised me that '89 would be better. Atari announced some lower priced desktop publishing specials. These turned out to be marred by shortages of products throughout '89. In the Gold Room, Atari attracted few new dealers, but they did convince the old ones that Atari could shine.

Sig Hartmann made the rounds, toward Christmas of '88, making promises that Sam Tramiel was obsessed with the American market, and "You're gonna see advertising like you wouldn't even believe!" (in 1989) he told us. Of course, we believed. We wanted to believe. How could a group of people who had been so successful with Commodore blow this golden opportunity to be a large part of the global market. The ST was still a great value at this time and had far to go before it reached market saturation.

European Mags Replace U.S.

Editorially, the fallout was becoming fairly serious, though. After the demise of *Compute ST, St Applications* soon disappeared, then *ST Log* stopped publishing, later to be picked up by Larry Flynt publications looking for ways to expand and legitimize his Hustler empire.

About this time the European publications stepped into the breach, as had European software. *ST User, ST Action,* and *ST World* from England began to make regular appearances on the American scene, and everyone who saw them was amazed at how slick

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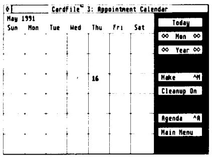
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May 1991
Sun Mon Tue Wed Thu Fri Sat
16

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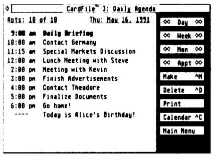
CardFile™ 3: Daily Agenda
Apts: 10 of 10 Thu: May 16, 1991
9:00 am Daily Briefing
10:00 am Contact Germany
11:15 am Special Markets Discussion
12:00 am Lunch Meeting with Steve
2:00 pm Meeting with Kevin
3:00 pm Finish Advertisements
4:00 pm Contact Theodore
5:00 pm Finalize Documents
6:00 pm Go home!
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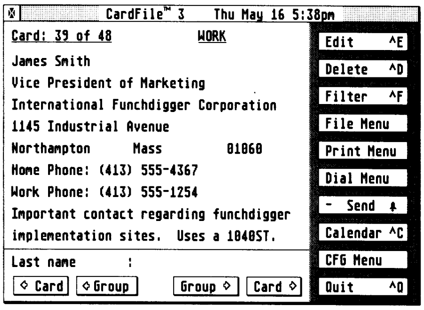
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and well done they were, and still are. Some people asked if they might be government subsidized. A new magazine to appear in England at this time was *ST-Format*. In Germany, the ST magazines rivaled *Computer Shopper* for thickness and informativeness. *PD Journal*, a thick, slick magazine was devoted exclusively to public domain software.

April World of Atari Show

In April 1989, at the World of Atari in Anaheim, California, Joe Mendolia, and Mike Dendo outlined Atari's new ad campaign and the rollout for the STacy, shown at this show, and for the Portfolio. Both would be on the market by June, 1989. At a music demonstration sponsored by Atari, Sam Tramiel spoke of how he had not wanted the ST to have MIDI ports, but now, this was the salvation of Atari. He also said that the STacy would be on dealers' shelves in August of 1989, or he would quit the company.

The Portfolio actually made it by October. The STacy was shown again in Las Vegas in the East Hall in November, 1989, but Atari's old nemesis the FCC still had not given the machine Class B certification. To date it *still* hasn't gotten this certification.

A lot of hot new products were shown here, and in some ways this was the peak for Atari users. Dave Small introduced the *Spectre GCR*, turning the ST into a MacPlus instead of a 512 enhanced. The Codeheads were there with some of the slickest utilities yet seen on the ST. Zephyr introduced the STeFax, the only two-way fax machine which runs off the ST. Wuztek showed their multi-frequency monitor. Migraph had *TouchUp* on display, an excellent image transliterator and bit image touch up program.

Bill Teal was there with his doomed *pc ditto II*, but none of us knew it at the time. We thought it was a tremendous follow up to *pc ditto* software which ran about one quarter the speed of an original IBM PC. As it turned out, Atari's European success was a double edged sword, and a German product, *PCSpeed* got to the market before Teal's. Also *pc ditto II* had many installation problems due to its size, and Avant Garde went under.

By the end of '89 almost no-one still believed Atari, although many of us believed that the quality of engineering would save Atari if they could somehow just put a winning team together for marketing the ST as a serious computer. Talk began of Atari "doing it again" with a 68030 machine, in about a year.

Federated and Clone Competition

While Atari continued having its production problems, Federated began to weigh more and more heavily upon them. The San Francisco Chronicle refused to run their ST ads because Atari couldn't pay Federated's bill. The promised advertising campaigns never seemed to materialize.

Meanwhile, VGA was taking over from EGA and CGA in the IBM world and prices were coming down. Atari was still competitive, but every month dealer numbers were declining. More of us who were selling Atari's began selling clones, and a number of dealers began selling Amigas. Users would note that the Amiga section seemed to be growing in comparison to Atari. In fact, in '89, Amiga promised and delivered a $25 million television advertising campaign, banking that the name recognition would pay off in the future. Atari executives scoffed that the ad campaign would be a big loser and Commodore would lose money over Christmas. They did, but they gained ground over Atari. Whether deserved or not, Amiga is considered the premiere Video machine by *Video Times*, and has regular sections in many magazines which don't even mention Atari now, such as *Computer Shopper*, *Computer Currents*, and *MicroTimes*. It also gets front page coverage on *Byte* magazine, something Atari has not had since the introduction of the 1040ST.

Lost Cause

At Comdex Winter '89, Jack Tramiel pronounced promotion of the ST to be hopeless. This was a private statement to me rather than a public statement to the media, but the Atari booth loudly confirmed that Atari's interests were changing. The Lynx and the Portfolio would be Atari's salvation. The displays featured a STacy running music programs, a PC4 attached to the Portfolio, which had just begun shipping, and a 520 running Bently Bear programs. *DynaCadd* was being shown running a nice sized plotter. One of the nicer looking products on the monitors was the ill-fated *Deskset*, one of Leonard Tramiel's pet projects, which had potential but cost as much as *Pagestream* and *Calamus* both do, was hard to learn and lacked flexibility in the area of printing. It supported only the Atari SLM804 and the Compugraphic 8000 series.

This was the only time I have ever seen Rod MacDonald, publisher of *ST Informer* and an eternal optimist, depressed. He felt, as I did, that Atari just wasn't doing all they could to promote the ST. In reality, the Tramiel's have always tried to promote what they consider to be good business sense. They saw it to be too late to breathe new life into the ST, because its resolution and disk drives seemed to be losing ground.

In my opinion, their biggest problem was in never having recognized what their machine is to us, the users. The ST is a working man's machine—inexpensive, expandable, and powerful—but it requires someone beating the drum to sell it. Atari's problem has always been aiming too high or too low, something the clones have never been guilty of. And it is the clones which sell 84% of the machines, not any of the four or more microcomputer standards sold in America. So there it is. The ST running Bentley Bear or operating laser printers and $5,000 plotters. The concept misses the mark the machine is designed to fit, that of an everyman machine. One for people who roll up their shirtsleeves to go to work.

Nonetheless, Christmas 1989 was pretty good for sales with a very low priced 520 STFM bundle. The 520 would stay down in price, and with DRAM prices falling, it became very economical to upgrade 520's.

People Can and Do Make the Difference

Bob Brodie was hired by Atari as user group coordinator in late '89. He continues in that position today. Bob has a lot of fans in Ataridom, especially because he travels to user groups. In the Atari world where one gets almost no attention and hardly ever even hears anything good of Atari, someone like Bob spreading some corporate attention around gains both he and Atari considerable praise from many users.

A good employee can make a lot of difference, although not always as much as he would intend to. Charles Cherry was hired to do developer support and, for the year he was there, from summer '89 through summer '90, Atari actually had developer support, something they had not had before Charles Cherry, except for a brief stint by Richard Frick, one of the best people Atari ever had. Sig Hartmann was also a great man who brought to Atari dignity and honor. Sig was largely responsible for the rapid development of 1,000 pieces of software for the ST that Atari had within 12 months.

By March, 1990 the STacy dribbled onto the market for Class A sales only, but never was available in any quantity more than 2 or 3 at a time. Mike Dendo was replaced by Bill Crouch who did an admirable job of juggling fact and fiction and procreating trust within the dealer sales interface with Atari. Here was a dedicated person who believed in the machines Atari sells, and truly cared for people.

In the summer of 1990, Atari had a pretty good staff, even though Sig had been gone since November '89. Sam seemed positive about everything, Bill Crouch seemed very competent and upbeat, Wayne Smith was the sales wonder of the West Coast. Mike Groh and Bob Shuricht were keeping the flag flying in the East Coast. Shirley Taylor was finally beginning to get some long deserved attention in sales. Bob Brodie seemed effective with the user groups, letting them know Atari cared. Randy Hain and Ted Maciejewsji were running an excellent warranty repair department, Charles Cherry was actually telling developers the truth and selling them product when they needed it. And Elie Kenan was being brought in from France to revitalize Atari in America.

At Atari's stockholder meeting in May of 1990 Sam Tramiel announced the July 1990 release of the

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TT030 32mhz. He said that Atari was set to knock the socks off of Apple's Mac II CXI and the Amiga 3000 as well as IBM clone 386's. He also said that FCC Class "B" was a foregone conclusion because three independent agencies had passed the TT so far. FSM GDOS was also announced with an imminent release date of August.

In August, the TT was released for sale in Germany. In September, Atari promised its dealers that we could place purchase orders for immediate delivery of TT's at Comdex in November. This, once again, turned out to be premature. As of June, 1991 the TT *still* is not Class B (home use) and the first shipment to dealers in small amounts wasn't until April 1991, a little too late and a little too high priced to make much impression on the market.

The Unraveling

Then everything began to really come apart at the seams. By mid-1990 one of •the most serious Atari problems was spot shortages which would last for months. The usual shortages were SM124 mono monitors, absolutely essential for serious usage sales. Frequently 1040 STE's were unavailable. The 1040 STE made it to market six months late and with enough incompatibilities with hard drives that it was taken off the market for six weeks while the bugs were ironed out. In short, 1990 was Atari's worst year.

Mega 4's and Mega 2's were in short supply. Atari's Lynx and Portfolio sold, but not in the quantities which were hoped for. In July, Sam proclaimed there would be no more shortages, but within the month, the same old problems were back. No more Mega's. No monochrome monitors. David Harris and Meade Ames Klein, who had taken turns marketing for Atari in the beginning of the year, were shuffled to different positions. Then there were monochrome monitors but no color. And finally, monitors but no computers. There were almost never any STacy's and Atari even found itself incapable of producing in-warranty replacements of STacys that didn't work.

STLog ceased production as did *ST Xpress* soon after this. *ST Log* was bought by *Antic* who intended to use their subscriber list. Some of the staff from *ST Xpress* helped put *ST Journal* together, which in '91 would become *Atari User.* With fewer users, fewer advertisers, and less excitement, it was becoming harder for magazines to hold on in a shrinking market with diminishing returns.

In August 1990, Charles Cherry left Atari. Immediately the developer newsletter all but ceased. I have only seen one edition since Charles left. Not long afterward, Elie, like so many men before him, also decided to take a hike. Other good promoters such as Frank Foster, in charge of MIDI development, and Jim Fisher left as well.

At Comdex 1990, while showing my fax machine and Sherlock, an OCR from Germany, in Atari's booth, I gained a broader perspective of Atari's place in the world. Near the front door of a major hall at the Sands, one could see most people pass to the left or the right, wondering just why Atari was here. About 500 stopped and expressed interest at becoming dealers. Quite a few more people stopped and were awed by *Calamus* on the TT, but the truth is, it takes more than a quality product to make it in the world of popular products.

In November '90, Bob Brodie informed user groups that the Mega STE had passed FCC and would be in all stores by January. He promised heavy discounting. Heavy discounting may be music to the ears of shortsighted users, but to a dealer, it's a "Detour: Rough Road Ahead" sign. Dealers should have suspected that Atari had devised a plan to eliminate their authorized dealer network. Then Wayne Smith, Bill Crouch, Gerald Lillipop, and a few others were fired all at once. Atari went totally to distribution, feeling that mass marketing and mail order would save the day.

The fact is that dealers need to be able to make money predictably. Most of us have learned to live with a 15-20% profit ratio. Heavy discounting means a 10% or less profit ratio. The idea is that mail order requires little support and no storefront, so low profit is, therefore, justifiable. On the other hand, Atari apparently thinks a few select dealers, "Strategic Partners," will invest a heavy amount of learning about specialized industries such as print technology, animation, and MIDI in order to gouge a few buyers with 40% profit ratios.

The shortsighted aspect to this is that most dealers sell other lines and need respectable profits with a medium to short learning curve. Atari, through its marketing and sales methods, discourages the middle ground of 15%-25% profit ratios, the ground where a supportive friendly dealer can sell to 95% of the public and continue to exist.

The Present

In June of 1991, there are still many shortages. Atari is banking most of its hopes on distribution sales by whatever means and a strange relationship by which they back and promote *3K* and *Calamus* and a few favored developers and VAR's at the expense of all other developers and dealers. Dealers see TT's advertised mail order while non-favored developers can't get one. Ostensibly, this reflects Atari's new two-tiered developer and dealer relationships. Supposedly, the top tier of developers are those who have actual products on the market or who understand high end software applications and can market them.

Thus, it seems, that Atari misses the mark once again, aiming low and high instead of for the body where the vast majority of potential users are: word processors, who want entertainment (i.e. VGA); small businesses, who want good accounting and telemarketing programs; and sales persons, who want to track clients. The best evidence of this is what *WordPerfect* and *Microsoft Write* are on the ST and what they are on other platforms. Plus little programs like *Turbo C, Sidekick, Quicken, Paradox, Q&A, Microsoft Works* and standard paint programs on Macs and IBM's. These are what capture new users.

Into the 1990's

As we move into the nineties, sales are off in Europe and not much up in America. Atari's staff seems to me to be less inspiring than before. There are some bright spots regarding desktop to press preproduction and animation, but there are dim areas regarding Atari's last bastion, MIDI, and America's perception of Atari, the game company. The Lynx is touted widely even on national television. Jim Capparell has ceased production of *STart* and there are now no slick Atari magazines in America. Michtron's Gordon Monnier has left, WordPerfect has ceased ST development. Practical Solutions is out of business, Drafix ceased development two years ago, Softlogic produced *Pagestream 2.0* eight months earlier for the Amiga than for the Atari. Timeworks says they have printed their last series of *WordWriter*. First Word Plus has closed its American office. ISD is shifting its focus to IBM, as is Migraph. The TT is still class A and the Mega STE is class B with enhanced CGA or mono graphics and a 726k disk drive.

Is Atari a sleeping giant or is there a black heart inside there which won't allow success? Can anyone, anyone like Mike Ditka, Bill Parcels, Bill Walsh, or John Madden, Vince Lombardi, Chuck Noll, Don Shula, Weeb Eubanks or Knute Rockne, to name a few of my favorite football coaches, get in there, and whip the great Atari potential into a winner?

There Is Still Hope

There is some positive to accentuate. With the East European market opening up and cooperative programming between America and Europe, all that is really necessary is a cohesive marketing plan for Atari Business Computers. That means a consistent marketing approach with adequate product and advertisement so that dealers and developers can make good money. The user? A user wants availability and respect. Atari needs only to succeed to satisfy the user. Success, Atari, is what you owe your stockholders, your dealers, your developers, and your users. Then, the U.S. market will pay you the respect your products demand.

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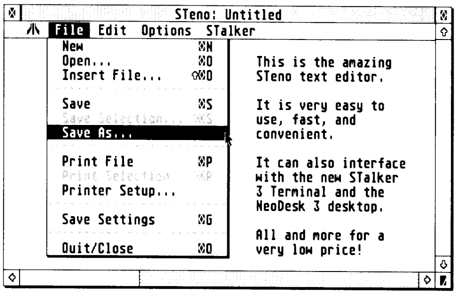

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Current Notes ST Library

MAY 1991

#555D: UTILITY NO. 49: *ABFormat*, Calendar Desk Acc V4.7 and *CALSH47A*; HotWire's screen saver and mouse accelerator; *IMG2ICN*, convert .IMG files to Degas Elite; *IMGVIEWR*, view .IMG files in 4-windows; *MCF*, desk acc shows directory structure; *ST_TOOLS*, PC Tools look-a-like; *TN_PCALC* v1.2 a windowed printing/programmers calculator; *TLC_ATTR* displays ALL files and allows changing attributes; *TLC_FIXR*, change text strings in programs; *TLCFORM2*, faST 9/10 sector formater. *TLC_NAMR*, use all characters in filename; *TLC_PLAY*, load/manipulates all digitized sound file formats. *TLC_SHOW*, quick and dirty Spectrum viewer; *X-MON*, replacement driver for Moniterm monitor.

#556D: CALAMUS NO. 4. Glip fonts. *ACURANSX*, an Acuransx created in Outline ART. *THE GUNTH*, 2nd place winner and *Jitney*, 1st place winner in Outline ART contest. *MYCALNDR*, calendar. PST fonts.

#557D: HERO! DEMO. graphic adv game with hundreds of items and creatures and over 200 rooms.

#558D: ST GAMES: *AMAZE*, (c/m). *Dark Castle* (c). *Daniel's Dungeon* maze game (c/m). *Reaction* (like ATAXX)(c). *Super Mastermind*.

#559D: FINANCIAL UTILITIES. *FGRAPH* demo, many common business/scientific graphs. *APRO-CALC*, professional, commercial-quality desktop calculator. *BIG-BUX13*, helps you manage your money. *CHECK_BK* and *Chekbook* v1.19.

JUNE 1991

#560D: OTHERWUZ. (C) *Wuzzlers* is a hangman game where picture hint is displayed with each wrong answer. Incl file with nearly 50 picture puzzles.

#561D/562D. THE BIBLE SERIES NEW TESTAMENT. 28 ARC files w/1,311 files, Irving Risch's gift to the Atari Community.

#563D: GAME DEMOS. *BUGST-Bug Bash* by Big Shot Software. *CAPTIVE*, excellent futuristic game w/Dungeon Master mouse-view gameplay. *MSTDRIVE*-Jupiter's MasterDrive by UBI SOFT. *POND*-James Pond by Millennium.

#564D: TEXT EDITORS. *2BS FKEYS*-2-Bit F-Keys V0.92 assign text string to your function keys. *ELVISED, GNOME, and MGEMACS*-UNIX-style text editors. *MINITX22*-mini ver of TX2 File Viewer v1.42. *STEXT14F*-SText, a fast file reader. *TALKER*-talking text file reader. *TX2CNVT4*-TX2 Converter.

#565D: DESKTOP UTILITIES. *GOGOST41*-replacement for Desktop allows quick access to all your programs and files. *BOOTMSTR*-allows you to configure the programs and data files to be used when the system boots. *MAX30DEM*-demo ver of MaxiFile 3.0. *MENUPLUS*-a complete desktop enhancement to quickly launch (run) up to 160+ programs on your hard disk or floppy disk. *ZEST*- (M) simulates look of NeXT desktop, incl calendar, add book, typewriter, paint prgs.

#566: CAPITAL FUN! V1, Enque Software, teach and reinforce fundamental capitalization rules.

#567: UTILITIES. *ACC13*-Acc V1.3, load all of your accessories from folder. *ARCSH25*-ARC Shell 2.5 adds GEM interface to ARC.TTP and LHARC. *AUTOARC*-automatic archiving of files. *DCBOOTIT*-v1.0 run a BOOT DISK from desktop. *DCLEFTY*-V1.0, for left-handed users, swaps the L and R mouse buttons. *DCPOPBAR*-V1.0, a popup menu of the menubar entries. *DC_RT_DC*-quick right mouse button click emulates a left double click. *DCTOPPER*-automagically top the window under the mouse. *FLRMT3_5*-custom formatter, includes versatile virus utility *FUNKALERT*-assigns buttons in GEM alert boxes to function keys. *LZH11318*- LHARC, v1.1318, w/docs. *MKRMDIR*-.ACC to make or remove folders within other programs. *MULTI135*-an archive shell to extract multiple archives into separate folders. *SQUEESIM*-Squeezes the last drops of disk space out of IMG files. *ULTRA*-ARCs complete disks into a single file.

#568D: DYNACADD DEMO, V1.84. Demo ver of DynaCADD. (M) 1MB (Replaces CN #460D.)

#569: AIR WARRIOR V2.0e Air combat simlator for multi-player battles on GEnie or individually in practice mode. (Note: this disk replaces CN #520, V2.0b.)

JULY/AUGUST 1991

#570D: B/STAT, V2.4, graphing and statistical analysis program req 1 MB.

#571D: ST WRITER, V4.1 popular word processor now works with Moniterm monitor, STE and the TT.

#572D: STE DEMOS NO. 1. *MYMONO*: mono emulator for STE. *BOING STE* demo illustrates the speed of the Atari blitter with approximately 400 colors displayed on the screen, plus *SPACE HEAP!* demo.

#573D: STE DEMOS NO. 2. *COOL STE* demo, 4,096 colors on your screen at once. *METASTE2*, 284 GEnie messages on the new Mega STE.

#574D: ARCADE GAMES. (C) *Seaside* concentration game; *Drachen* V2 remove all the tiles; *Colawars* colorful arcade action; *Splatter*-outwit your opponents; and *Space Jet*, simple space shoot'em up.

#575D: GAME DEMOS. (C) *Valgus2* -v3.0, complete squares around a center block; *Mah-Jong*-Shanghai clone; *Pipe Mania*-place pipes around the screen to catch the ever-flowing flooz; *WordBid*-Bid on letters; *BJP3DEMO*-explore game of blackjack; and *Debut*-sneak preview of planet simulation game.

#576D: ARTISTS TOOLBOX. (C) *Neochrome*-V0.5, paint program from Atari. *XS FX/D'ARTISTE*-a full featured drawing program. *Deluxe Paint ST* Demo by Electronic Arts.

#577D: UTILITIES. *BENCH2*-time your machine through 5 tests. *CAL51*-calendar desk accessory. *D_VIEWER*, view files without using the keyboard or holding down mouse buttons. *DBLEFEAT*-disable the growing/shrinking box effects associated with GEM windows and also allow redirection of drives. *DC_MWRAP*-DC Mouse Wrapper. *DEFSEL*-The Definitive File Selector. *DIRPRINT*-desk acc to print out listing of all the files contained on a disk. *DL II*–a checkdisk/unerase/diskedit program. *FILESORT*–sort ASCII text file. *FPPRNT*–outputs characters to the printer port more efficiently than TOS does. *LITEMAIL*–V2.02 GEM–based mailing label program. *MSE_TRIX*–Mouse Tricks desk acc gives user extensive control over mouse movement and menu style. *Read Text*, read and switch between as many as 8 text files. *REORG*– improves performance on hard and floppy disks. *RT_MOVE2*–enables you to move (as opposed to copy) files by holding down the right mouse button (TOS 1.4 only). *RFTDCA*–converts DCA/RFT file to Word-Writer–ST and back again.

#578D: UTILITIES. *DTERM_1K*–1k ver of terminal emulation. *ELF BOOT*–STARTUP utility! *GEM_XYZ*–shareware GEM version 2.01 of XYZ protocol for transfering files via modem. *LHA130*–V1.30 of LHA, archiver/unarchiver for LZH files. *PSFONTVW*–PageStream Doc file prints out All the characters in a Pagestream Font. *Q.TTP*–generate quotes for your BBS. *SORTIE*–V1.0 will sort any directory or folder by Name or by Date. *STREE104*–allows for searching for files using many different types of criteria. *VERIFY*–turn on/off the verify on your floppy drives.

#579: GRAPHICS UTILITIES. *DMJ_GIF*–GIF to Spectrum pic converter. *GALLERY*–convert DEGAS pic into a self–showing program. *GVIEW105*–V1.05 of GEMView, the picture–viewing accessory. *I_FLOYD*–color IMG file viewer specifically for MONO systems. *MAC2IMG*–convert MacPaint files to IMG raster graphiics file format. *VIEW*–whenever you double–click on any graphics file, *VIEW* will automatically display the picture.

SEPTEMBER 1991

#580D: PIZZMINI. Here is a short version of Stuart Bonwit's stick figure (pizzicata) ballet animation with sound. 1 Mb. (C)

#581D: CALAMUS NO. 5. 14 New fonts (Bernard Tangle, Absolute, Talansty, Windsord, Upperwes, Uncialds, Recycle, Galleria, Roosthvy, Hotshot, Fundrunk, Diego, Chilpepr, and Mini6) plus *FontView* (displays all characters in a Calamus font file) and *CALAMUS14* (239 GEnie Calamus messages.).

#582D: LLAMATRON and DAMOCLES. *Llamatron* is an excellent Robotron–type game from Europe, req 1MB. *Damocles* (a demo) is the latest release from Novagen and it is a brilliantly absorbing space game with high speed and solid 3D graphics.

#583D: BC–FORTRAN77. Ver 1.3C. BC–FORTRAN77 ver C is part of an extensive development system called version P. The purpose of version C is to make a FORTRAN77 compiler available for programming courses. Another advantage is that BC–FORTRAN77 is available for Amiga, Atari ST and MS–DOS computers. Disk contains compiler, linker, runtime library, math library and manuals.

#584D: OMNI V101. Multi–user, multi–tasking bulletin board system complete with documentation and full compatibility with all ST configurations.

#585D: HYPERLINK DEMO. HyperLINK is a multi–media, object–oriented application generator. The demo features a set of sample applications and also shows the application builder module with save/use features removed. Req 1MB, color or mono, ST/TT/STE.

#586D: FONT DESIGNER V2.0. This (non–saving) demo of Font Designer 2.0, distributed by MegaType, includes demo fonts in all major formats. This version of the demo–disk was released on July 1,1991.

#587D: WORD FLAIR 1.5. This demo version of Wordflair, by Goldleaf Publishing, is fully operational. The only limitations are that you may not print or save documents that you create. An EXAMPLES folder demonstrates Wordflair's power.

#588: UTILITES. *UNCLE35C* Shows\Prints complete directories, saves\appends ASCII format, merge\edit any ASCII file, stamp, rename, delete or copy any file. Create\delete folders, searches library OR disks for files, floppy formatter and label maker, clock. *ELFBOOT2* select desktop.inf files, choose programs to run, select desk acc, select and/or re–order AUTO folder programs, select ASSIGN.SYS files, and fully control system colors and parameters. *DISKSTAT* DC Disk Stat gives you a lot of disk structure information, like sectors per track, total tracks, total sectors, and much more! (C/M) ST/STE.

#589: UTILITIES. *ADDRSSME* Address and phone book desk acc. *CLOCKSET* ClockSetter Ver 1.3 set the system time and date. *COMPARE1* GEM–based file comparison program. View ANY type of file in any one of four display modes; search for ASCII or hex bytes. *DC_HOMEY* find your mouse instantly! *DCSALVAG* copy as much of any damaged file as possible. *FSORT_13* File Sorter v1.3 sorts anything. *MDATE* Make*A*Date is a Scheduler/Diary/Phone Book/Notes Database and TODO List manager rolled into one. *N_CAPSLK* (M) desk acc to show the status of the Caps Lock key by displaying a black or white square at the right top of the screen. *VIDEO* Bells & Whistles Videotape database, version 1.2, a very full–featured program which helps you track your movies, specials, etc. on videotape. Makes full use of GEM, with menus, buttons, and dialog boxes.

Current Notes

PD/Shareware

44MB Cartridges

No.1: 112 ST Disks
#347–#459

No.2: Spectre Disks
#1–$80

No.3: 95 ST Disks
#460–#554

All cartridges are $119.95 plus $4 S&H.

Current Notes PD disks are $4.00 each (10 for $35) plus $1 S&H per every 4 disks.

Order from CN Library, 122 N. Johnson Rd., Sterling, VA 22170.

Call (703) 450–4761 to use your VISA/MC cards and speed up your order.

Winking in the Dark

Radio Versus TV Advertising for Atari

by Bob Ledbetter

How To Make It Happen. Without advertising, a terrible thing happens. Nothing. Equally unfortunate is the fact that most people don't believe anything unless they've seen it on television. So what is a small business to do if that business does not get any national television exposure? That business must do their own thing on a local level.

The best form of advertising is word of mouth. Not print. Not pictures with sound. But word of mouth, i.e., radio. Major manufacturers know this and thus promote a simple thing called co-op advertising. The local merchant contracts with the local radio station of their choice for a certain dollar amount of advertising. The ad copy is written in a way that is satisfying to the major manufacturer and the major manufacturer pays for a portion of the radio bill, in some cases, 100%. Now the merchant has "exposure."

This brings up a question. Since Atari does not wish to spend their advertising dollars on television, do they have a co-op plan for local radio? The answer is a resounding YES! I believe Atari has made the correct decision not to do television advertising; it is simply too expensive. Not only for them, but for us, the user, because they would pass that cost on by increasing their prices. Did you ever stop to think why the other PC's cost more? Not only is the air time itself more expensive, the amount charged by a television station does not include the cost of the making of the commercial. To accurately compare oranges with oranges, one must add the cost of production to the cost of the air time, then divide that total by the number of spots aired to get the true cost per spot. This can then be taken one step further by dividing the cost per spot by the number of viewers to determine the cost per impression. Assuming one would spend an equal amount of money in both media, the cost per impression is far less on radio than television.

To Be Seen and Not Heard. Now any good tv ad person will tell you that your product must by seen. NOT TRUE, oh, not true. Visualize this:

> You order a squadron of B-52's to fly over Lake Michigan and drop 50 thousand tons of chocolate. After which, you order 15 hundred A-10's to fire 1 million pounds of marshmallows into the lake. Then, you order 2 thousand F-15E's to fire air-to-ground missiles into the lake. What I have just created for you is the world's largest cup of hot chocolate.

You see, that's exactly how radio works. You convey your message in the theatre of the mind. Now, do the same thing on TV. That's assuming you can get the Air Force, Hershey's chocolate, and Kraft to go along with your scheme, and *if* you can get a bank to fund this lunacy. (Not to mention the environmentalists!) The big question is, how many people actually "saw" this activity? I guarantee that every person just reading these words did. Think how much more effective it would have been to make this spot in vivid color by adding the radio sounds of the bombers,fighters, and rockets.

"Nobodies" Are Listnening

"Ah, but nobody listens to radio," you say. That's what the tv and print people would like for you to believe. In fact, some Madison Avenue Types decided the good ole, American merchant would believe "Nobody listens to AM radio." In their "wisdom" they knew they could not get away with saying "Nobody listen to radio," so they modified it by throwing in "AM radio." However, the Madison Avenue Types had not counted on Bruce Williams and TalkneT. He heard about the plot and found a small (read *tiny*) burg in South Dakota called Bruce. Population around 200. He then told his audience that the Madison Avenue Types thought nobody listens to AM radio anymore, and asked his audience to write to him. "I'm looking for nobodies," he said. "Just send me a card saying that you're a Nobody and that you listen to radio. Just send your card to Bruce Williams, Bruce, South Dakota." Twenty-four *cases* of cards later, they were up to their desktops in cards and had counted more than one hundred *thousand* cards. They quit counting. They had not run out of cards to count, they simply knew that 100,000+ responses were enough to make a point. Hundreds of thousands of "nobodies" responded. Nobodies of all ages, from kids to retirees, male and female, and all walks of life. So, when someone tells you "nobody listen to radio anymore," you say "You're absolutely right. Only hundreds of thousands of Nobodies listen to radio, and I want to reach them".

Then there are still folks who will say, "Radio doesn't work." This is my favorite. Our station had one of those kinds of merchants and we decided it was time for a test. I'll not go into great detail, but this merchant put their *entire* budget for a particular promotion into our two stations, NewsTalk and Top 40 Rock-N-Roll. This was for a two-day sale, and the

ONLY form of advertising was radio. One AM station and one FM station, for only five days. When the sale was over, the merchant had more than achieved the desired results (to clear enough money for a trip for two to Hawaii for two weeks) and had "wall-to-wall people, both days." A week after the sale, someone told the merchant they had seen the ad in the newspaper, and several others said they saw the ad on TV. Very interesting! The **only** form of advertising used was radio.

Don't let Atari's decision not to use television deter you from advertising. Check into co-op advertising from Atari. The person to talk to is Arlene Arimura, 1196 Borregas Ave., Sunnyvale, CA 94086, (408) 745-2000. Atari is not the only computer-type company offering co-op advertising. According to the 1990 RAB Radio Co-op Source Book, there are one hundred twenty-eight companies listed in the "computers and software" section. (That does not include the companies listed in the other "supporting" categories). Included in the listing are Panasonic, Epson, Acer America, Timeworks and WordPerfect.

Thus there is more than meets the eye and/or ear when it comes to advertising. So, ponder this: Not advertising is like winking in the dark. You are the only one who knows what you're doing.

We'll pay you to read ST Informer

Name ____________________

Address ____________________

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Signature ______________ Date_______

We will send you a $3.00 value full edition of ST Informer Magazine to read with our compliments. Read it over, evaluate it and then either send back the invoice with payment for 12 more issues or write cancel on the bill and return it. In either case, enjoy the first issue with our compliments. *ST Informer* Monthly tabloid is packed with the latest Atari news, reviews, commentary and PD offerings. When you subscribe for $19.95 you receive a FREE PD disk. Choose your disk from our PD catalog sent with your subscription acknowledgement. Mail this coupon today, or call (800) 800-2563 and charge it to your charge card. Mention Current Notes and we'll send an extra issue..

ST Informer

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Word Perfect Rhymer

Review by Dick Biow

Why are so many Atarians switching to PC's or adding PC emulators to their ST's ? It's the enormous amount of unique software available only for MS-DOS, of course. Programmer Darek Mihocka has things backwards: he's writing an ST emulator for the PC! What programs would you run on this setup? Who would stoop to using *WordPerfect 4.1* in Atari simulation if he owned an 80X86 machine that would handle *WordPerfect 5.1*? (Next thing you know, Darek will be writing a Timex emulator for the Cray supercomputer.)

Back to the subject: One of the most novel of the unusual programs that run on MS-DOS is *WordPerfect Rhymer.* Limerick writers like Edmund Lear would have given their best quill pens for half an hour's access. Here's the kind of stuff you can knock out in no time at all:

A small engineer with great smarts
Lifted Atarian hearts:
Came out with a sac
That ran like a Mac
'Till Apple got stingy with parts.

This was the portable's hour;
The STacy was all set to flower.
They thought it would go,
But it died at the show,
After ten shining minutes of power.

While cash-flow continues to slumber,
Atari acts dumber and dumber:
Executive wienies
All drive Lamborghinis
But don't have an 800 number.

Rhymer reviews over 90,000 words: if it can't find your rhyme for you, you may have to reach for unusual names, as in the last stanza.

If you want more details, dial WordPerfect at (801) 225-5000.

BLUE RRIDGE ATARI COMPUTER ENTHUSIASTS

AtariFest a Huge Success!

By Don and Carole Terp

The Blue Ridge Atari Computer Enthusiasts (BRACE) held its second AtariFest on Saturday July 21st at the Westgate Shopping Center in Asheville, NC. With over 450 Atarians attending from all over the Southeast, this was the more successful of BRACE's two shows. From 12 noon until 6:00 PM the place was packed, after which the workers and speakers adjourned to an adjacent Chinese Restaurant for a sumptuous buffet, courtesy of 100% Atari dealer, Sheldon Winick owner of the Computer STudio at the Westgate Shopping Center.

Sheldon had one heck of an inventory on hand for this event. At the end of the day the place looked like Gimbel's basement after a sale. Carole found a card reader for her Portfolio and I picked up a copy of Tracker and ICD's hard disk utility.

The Westgate Shopping Center is a "T" shaped structure with the top of the "T" facing the parking lot and the descending part of the letter, the enclosed portion of the mall.

Tables were located along both walls of the enclosed section. One problem was the power receptacles located in the floor of the building, some distance from the walls. This necessitated large quantities of duct tape and furniture strategically located to prevent the inopportune disconnection of power, caused by large feet tangling with power plugs.

Interestingly, there were several power dips during the show accompanied by groans and a few expletives. No disasters, though. Hurray for Atari's systems!

Two seminar rooms were in operation. Seminar Room 2 was devoted to MIDI. A movie entitled "MIDI and the Atari ST" was the first offering, followed by Dr. Timothy Brumleve demonstrating *K5/K5m Voice Librarian* (MIDI). *Voice Librarian* permits the customizing of the voices in a musicians synthesized equipment, providing additional flexibility and creative expression.

Mike Cloninger of Dragon Studio next gave a MIDI performance. This was followed by an open discussion of MIDI and the Atari ST. MIDI thrives with the more sophisticated musicians and is rapidly gaining acceptance with the smaller groups. Asheville is not too far from Nashville and music is a big thing here in the mountains. Eric White of the Knoxville Atari User Group (KAUG) also demonstrated some of his MIDI creations. In addition, Mary Pinckard, of KAUG, helped out at the registration table. This is the second year that KAUG has participated.

Seminar Room 1 played to a packed house (about 125 seats plus standing room) all afternoon. Goldleaf Publishing's John Fox explained *Wordflair* as a document processor, more than a word processor but less than a DTP program. He also mentioned many of the other products Goldleaf will be marketing in conjunction with German software houses. Sounds like we'll be getting some new powerful software in the months to come.

Don Terp gave an overview of DTP on Atari equipment. This evoked many interesting and discussion provoking questions. *Calamus SL* (the color version) was next presented by Nathan Potechin of ISD Marketing. Nathan does not recommend the SL, unless you intend to do color. The S (monochrome) version will serve for applications where color is not a factor.

Nevin Shalit of Step Ahead Software explained the workings of *Tracker*, the very simple list manager program with a pile of features. Dorothy Brumleve's talk on "Empowering Young Learners Through Technology" had young parents hanging on every word.

The seminar wound up with adversaries, Ralph Mariano of *ST Report* and Bob Brody of Atari presenting their versions of information about Atari (not at the same time, of course). Both were candid, although, Ralph was more subjective. The questions flew thick and fast.

Bill Aycock, Sysop on Compuserve's Atari Forum, Darlah Pine, Sysop of the Genie Atari Roundtable, Mike Vederman of Double Click Software, Jeffery Williams of ICD, Clifton Willard of Willard Productions, Brian Gockley representing ST Informer as well as his own software company, and Ralph Roberts, author of books on computer viruses, rounded out the scene.

The Computer STudio had quite a supply of the July/August edition of *Current Notes* at the beginning of the day. We couldn't find any at 6:00 PM.

The door prize event was most frustrating as numbers were called on either side of the numbers we held. Many prizes were won and many Atarians went home very happy over the events and success of the show.

Congratulations are due the hard working BRACE team headed by President Van Estes, Vice President Cliff Allen and Computer STudio owner Sheldon Winick. They all did a magnificent job.

Wait 'til next year.

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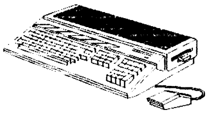

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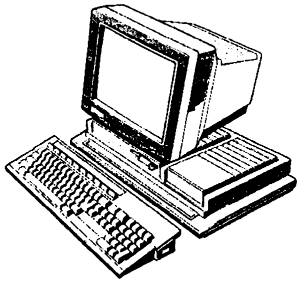

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UIS 3.3	$18.95

Too many excellent titles to list. Call for current pricing and availability. All prices are subject to change.

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Free shipping on all orders above $100!

ASCII, BLAST, AND PAUG FEST A GREAT SUCCESS

MIST Atarifest III

By Dan Ward

MIST Atarifest III held on July 27 in Indianapolis, Indiana was a great success. Slightly more than 400 people from Alabama, Illinois, Kentucky, Kansas, Ohio, Michigan, Missouri, Pennsylvania, and Wisconsin attended the seven hour show hosted by the users groups of Mid-Indiana ST (MIST). MIST is an alliance of Atari ST users groups located in central Indiana. Currently, there are three users groups in MIST. They are Atari ST Computers In Indianapolis (ASCII), Bloomington Atari ST (BLAST) from Bloomington, and Purdue Atari Users Group (PAUG) located on the campus of Purdue University in West Lafayette.

Twenty-one vendors, eight users groups, and Atari's Bob Brodie attended the show. The vendors included Indiana dealers Cal-Com (Kokomo) and Computer Works (Carmel), Mars Merchandizing and One Stop Computers (Chicago), and Randall's Home Computers (St. Louis). Hardware specialty companies were AT/Com Electronics, ICD, Inc., and Touch Technologies. Graphics oriented companies were Electronic Spinster Graphics, Megatype, M-S Designs, SKWare One, and Wiz Works. Companies specializing in applications included Apprentice Software, Clear Thinking, D.A. Brumleve, Gribnif, MP Graphics Systems (also representing ICD), and SoftLogik. Other vendors attending the show were Atari Interface Magazine and CompuServe.

Users groups with booths at the show were Cin'tari from Cincinnati, three Illinois user groups: Eastside Atari Users Group from Alton, Lake County Atari Computer Enthusiasts, and ST Atari Resource from Belleville, and, from Wisconsin, the Milwaukee Atari ST. All the clubs were busy demonstrating assorted public domain and shareware programs, as well as selling used hardware and software at unbelievably low prices.

Seminars were conducted throughout the day and included informative presentations on Lexicor Software by Bill Rayl of *Atari Interface Magazine*; Editing with *EdHak* by Craig Harvey of Clear Thinking; Telecommunications by Bob Retelle of Compuserve; and Fonts by Don Turnock of Megatype. In addition, a MIDI Music display, supervised by Keith Meiere of ASCII, and a MIDI Maze Tournament, sponsored by PAUG, were running continuously during the show.

Bob Brodie gave an excellent talk on recent developments in the world of Atari. Bob ended his talk with a humorous question/answer session. Bob was pleased to find that over half of the people attending his seminar had not previously heard him speak.

The Midwest Atari Regional Council (MARC), a loose association of users groups in the midwest which promotes the exchange of information between users groups, held a meeting following Bob's seminar. Hank Vize of EAUG, moderator of the meeting, invited those clubs attending the show, who were not already members, to join MARC. The individual group's officers then discussed methods of maintaining contact, deciding to appoint one individual with a GEnie account as each club's representative to MARC. Finally, the groups discussed the possibility of a traveling MARC Atarifest, which would be held in a different city and hosted by a different club each year.

Door prizes were awarded at 30 minute intervals during the show. Each vendor in attendance (as well as some which couldn't make the show) donated items to be given away. More than 75 items, including a Migraph Handscanner, *DynaCadd*, *PageStream 2.1*, TOS 1.4 chips, a complete *Calamus* DTP package, magazine subscriptions, games, font packs, assorted applications, tee-shirts, and travel mugs were given away. Approximately one out of every five show attendees went home with a door prize.

Vendors were extremely pleased with the show. ICD sold out of several products and said they set a new sales per attendance record. Craig Harvey of Clear Thinking reported that he did better at MIST Atarifest III then he did at either day of the Windsor show. MS Designs sold several *Font Packs* as well as cleared out their stock of fonts packaged in recycled paper. Randall's Home Computers went home several ST^E's lighter, and Computer Works made many new contacts and has already seen an increase in its repair service as a result of the show. Overall, most vendors expressed pleasure with this one-day show, and said they would return again next year.

The only negative comments received about the show concerned some technical problems M-S Designs had getting their "souped-up" ST to work (seems there wasn't enough power in the lines), an uncompatible phone connector for the CompuServe booth which took two hours to replace, and the shop-lifting of a Micro SCSII Adaptor from the ICD booth.

This was the third Atarifest sponsored by MIST and by far the most successful. Thanks go out to everyone who planned, organized, contributed and attended what Bob Brodie summarized as a "successful one day event." Without your participation, there would not have been a MIST Atarifest III, or even the thought of a MIST Atarifest IV. See you next year!

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Complete removable hard drive systems (includes 1-cartridge) using a Supra 2.0 host adaptor. For ICD AdSCSI host adaptor add $10 or for an ICD AdSCSI + host adaptor add $20. Removable and fixed hard drive, add $289 for 42Mb, $319 for a 82Mb and $389 for 105 Mb hard drive.

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MEGA ST internal hard drives kits consists of our low power consumption hard drives and the ICD AdSCSI Micro host adaptor plus installation instructions.

FULL 2 year warranty on ALL of our hard drive systems. Includes hard drive, host adaptor, power supply, etc.

All Hard Drive Systems and Kits are shipped with 40Mb+ of PD/Shareware/Demo software.

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The above with an internal clock chip	add 40.00
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Atari SM124 Monochrome Monitor	159.00
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Atari SLM605 Laser Printer	999.00
Atari ST TOS 1.4 Chip Set (2 or 6 set)	89.00

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Cordless ST Mouse (Practical Solutions)	75.00
Drive Master	25.00
DVT Hard Disk Backup System	69.00
Forget-Me-Clock II Cartridge	42.00
Golden Image Mouse	39.00
Golden Image DS Drive	129.00
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ICD AdSCSI + Host Adaptor	94.00
ICD AdSCSI Host Adaptor	84.00
ICD AdSCSI Micro Host Adaptor (Mega ST)	79.00
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Indus GTS 100 DS Drive (w/track indicator)	129.00
Indus GTS 1000 5" Drive AND Drive Master	169.00
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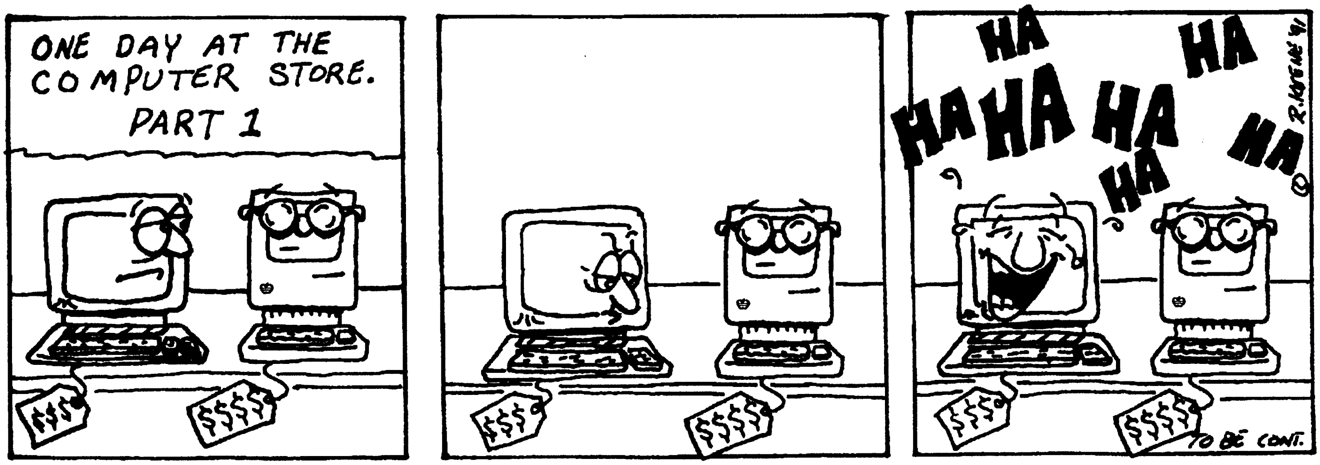
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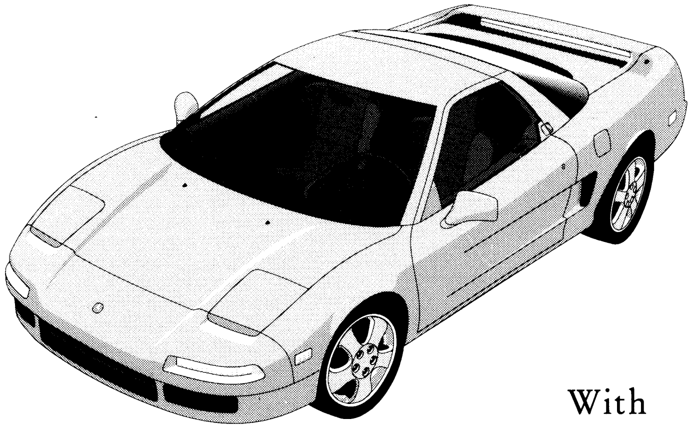

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